CONTRIBUTIONS FROM THE SCHOOL THAT INFLUENCE STUDENT ACHIEVEMENT: DIFFERENCES IN TEACHERS' PERCEPTIONS

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ABSTRACT

Erica Nicole Pollock: Contributions from the School that Influence Student Achievement: Differences in Teachers' Perceptions
(Under the direction of Steven E. Knotek)

A substantial body of research has examined student achievement over the years. Though this research is vast, there is no indication that the findings are being used in schools and classrooms. Hence, there is concern regarding the research to practice gap in schools. Due to the unique opportunity teachers have to impact student achievement, their knowledge of and perceptions related to the factors that influence student achievement are important. When teachers' perceptions align with the research findings, students may be educated in the most effective manner possible. The primary purpose of this study was to determine whether teachers' perceptions, of the effects of school factors on student achievement, are significantly discrepant from the research, differ as a function of demographic characteristics, and which demographic characteristics predict perception alignment with current research findings. Understanding differences in teachers' perceptions is crucial to designing and implementing evidence-based interventions, acquiring teacher support, and addressing their concerns as key stakeholders.

Participants were solicited from teacher organizations willing to participate in a web-based survey to measure teachers' perceptions of factors that influence student academic achievement. Participants in this study included teachers working with pre-kindergarten through high school students in the United States.

Paired-samples t-tests indicated a statistically significant difference between teachers' perceptions and current research findings for all of the school factors examined (p=0.000) except for mainstreaming (p=0.419) and multi-age/multi-grade classes (p=0.154). Teacher perception alignment with current research was greatest for the mainstreaming factor (M=2.26) and least for the reducing class size factor (M=69.60). Hierarchical multiple regression demonstrated a statistically significant difference in teachers perceptions based on demographic characteristics (F (32, 365) = 2.26, p <0.001). When separated into groups, teacher characteristics continued to have a significant impact on teacher alignment (F change (22, 375) = 2.422, p < 0.001) while school characteristics did not (F change (10, 365) = 1.796, p = 0.060). Only two demographic characteristics were individually statistically significant predictors of teacher perception alignment with current research: being a Black or African American teacher (β=0.12, p=0.03) and teaching at a religious private school (β= 0.16, p=0.002).

To my family, friends, and mentors, thank you for your continued support throughout my academic career.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND SYMBOLS

Avg.	Average
β	Beta Coefficient
c^2	Chi-Square Value
CLE	Common Language Effect
d	Cohen's *d*
M	Mean
N	Number of cases
p	P-Value
r	Correlation Coefficient
SPSS	Statistical Package for the Social Sciences
Std.	Standard
TP	Teachers' Perceptions

CHAPTER 1: INTRODUCTION

In his UNICEF appeal given on July 25, 1963, John F. Kennedy stated "Children are the world's most valuable resource and its best hope for the future." This quote will forever remain true. Therefore, it is incumbent upon the world to ensure our children receive the best preparation possible. Educating our children and adolescents is vital to this goal. As researchers have thoroughly demonstrated, the academic achievement of students is positively correlated with superior decision-making, civic participation, income, tax revenue, health, life expectancy, and quality-of-life of offspring (Baum & Ma, 2007; Cutler & Lleras-Muney, 2007; Smith & Holcombe, 2011; The NHHEAF Network Organizations, 2013). Conversely, student achievement has been negatively correlated with smoking, obesity, unemployment rates, poverty, and incarceration rates (Baum & Ma, 2007; Rosengren, 2013; Smith & Holcombe, 2011; The NHHEAF Network Organizations, 2013).

Previous researchers around the globe have recognized the importance of educating our young people. They have worked diligently to identify what factors influence academic achievement (e.g., Blatchford, Bassett, & Brown, 2011; Clark, Gleason, Tuttle, Silverberg, & Mathematica, 2011; Deke, Dragoset, Bogen, Gill, & National Center for Education Evaluation and Regional Assistance, 2012; Epps, 2010; Heller, National Center for Education Evaluation and Regional Assistance, & Regional Educational, 2012; Hemyari, et al., 2013; Huang, 2013; Kulo & Bodzin, 2013; Merritt et al., 2011; Nicotera, Mendiburo, Berends, & Vanderbilt University, National Center on School Choice, 2010), with the goal of assisting in educational reform designed to progress the educational system and more effectively educate our future

leaders and active, dedicated citizens. Throughout this educational research, student achievement has been primarily defined as the degree to which a student achieves established educational goals. Academic achievement is usually measured by standardized tests, curriculum based assessments, and grade point averages with regard to the academic skill areas of reading, writing, and math.

One researcher provided a unique synthesis of the current research on the factors that influence student achievement. John Hattie (2009) reviewed over 800 meta-analyses associated with student academic achievement and synthesized the information in a practical and intelligible manner. He organized the relevant research findings into six categories: (1) Contributions from the Teacher, (2) Contributions from the Curriculum, (3) Contributions from Teaching Approaches, (4) Contributions from the Child, (5) Contributions from the Home, and (6) Contributions from the School.

For each factor identified as influencing student achievement, Hattie (2009) determined an overall effect size, using both the standard Cohen's *d* and the *common language effect (CLE)* size indicator created by McGraw and Wong (1992). As described by Hattie, the *common language effect (CLE)* is "the probability that a score sampled from one distribution will be greater than a score sampled from some other distribution" (p. 9).

Hattie (2009) further explained:

> Consider as an example the difference in height of the average woman (5'4''/162.5 cm) and the average male (5'10''/177.5 cm), which is a *d* of 2.0. This *d* translates into a common language effect (CLE) of 92 percent. Thus we can estimate that in any random pairing the probability of the male being taller than the female is *d* = 0.92; or that in 92 out of 100 blind dates the male will be taller than the female. Now, using the example above, consider the *d* = 0.29 from introducing homework (throughout this book effect are abbreviated, following tradition, to *d*). The CLE is 21 percent, so that in 21 times out of 100, introducing homework in schools will make a positive difference, or 21 percent of students will gain in achievement compare to those not having homework. Or if you take

> two classes, the one using homework will be more effective 21 out of 100 times. (p. 9)

Hattie used both Cohen's *d* and the *common language effect (CLE)* size indicator to promote understanding for both educational researchers and school personnel alike. One of Hattie's goals was to decrease the research to practice gap in schools. Moreover, because the effect sizes in education research studies tend to be positive and give the appearance that everything that we do in classrooms works, Hattie developed a hinge-point or benchmark for comparing each effect size or CLE. This hinge-point functions an indicator of real-world difference. John Hattie developed this hinge-point based on his exhaustive review of the current literature.

Prior educational research established that effect sizes of $d = 0.0$ to 0.15 can be ascribed to simple maturation of the students (Cahan & Davis, 1987 as cited in Hattie, 2009). Therefore, Hattie identified effect sizes of $d = 0.15$ and lower to be educationally harmful because they suggest no academic achievement beyond that of intellectual maturation, without any schooling. Additionally, teachers typically achieve small to medium effect sizes (d=0.20 to 0.40) in an academic year. Finally, Hattie identified a medium to large effect size (d=0.40 or greater) as the hinge-point or benchmark for a variable to have an above average impact on academic achievement. He classified effect sizes at or above the hinge point as the *zone of desired effects* (See Figure 1) (Pollock, 2015).

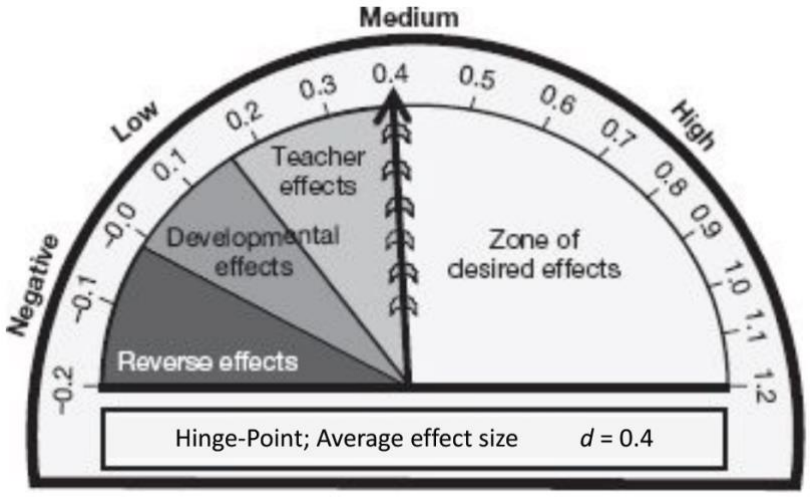

Figure 1: Illustration of John Hattie's Hinge-Point

As a result of Hattie's (2009) comprehensive approach to evaluating the existing literature, we have a better understanding of what actually impacts student learning. In spite of this, we do not have a clear picture of whether teachers recognize the level of influence each of these factors has on student achievement. Pollock's (2015) research indicated a discrepancy between teacher perceptions and research findings, though the homogeneity of the participants greatly limited the generalizability of the findings. The descriptive study showed that teachers did not accurately discern which factors actually "influence student achievement in a significantly positive manner, a significantly negative manner, or do not have any significant influence" (p.70). This was true for all categories examined: contributions from teacher, contributions from the curriculum, contributions from the teaching approaches, contributions from the child, contributions from the home, and contributions from the school. Teachers in this study demonstrated a tendency to rank all factors as having some degree of positive influence on student achievement, which is consistent with Hattie's (2009) research. Furthermore, teachers

demonstrated difficulty accurately determining which factors had greater influence on student achievement than others within each category when answering rank order questions.

Teachers have a significant opportunity to influence student achievement, as their contributions were shown to have the greatest impact on student achievement (d = 0.49; CLE = 35%) of the 6 categories (Hattie 2009). As key stakeholders in education, it is important for teachers to recognize and differentiate between effective and ineffective initiatives. Part of this recognition and differentiation ability involves understanding what factors influence student achievement and what level of effect each factor has on academic achievement. Based on implementation science, initiatives and innovations target these factors because they act as malleable mediators to student achievement. Therefore, when teachers' perceptions regarding the influence of these factors on student achievement align with research, they are able to distinguish which initiative and innovations will most effectively enhance student performance and academic achievement.

Additionally, teachers are the individuals responsible for implementing school reform interventions. Their support for and belief in evidence-based practices is essential to effectively implementing evidence-based practices with fidelity in schools and classrooms. Research has shown that beliefs influence practice (Frentress, 2014; Klehm, 2014; Sosu & Gray, 2012). Just as teachers' expectations for students have a significant impact on student achievement, teacher expectations of interventions, initiatives, and practices also act as self-fulfilling prophecies (Hattie 2009; Jussim, 2013). When teachers do not believe interventions, initiatives, or practices will be effective, they are less likely to implement these with high fidelity. Thus, it is important for teachers' perceptions to align with research findings so that they support and have belief in evidence-based practices.

In addition to the limited knowledge regarding teachers' perceptions about the degree of influence each factor has on student achievement, researchers have not examined how teachers' perspectives of these factors differ as a function of the teachers' sex, race, educational degree, where degree was earned, national certification status, years of experience, type of school employed by, grade(s) taught, services provided, school location, and school Title 1 status. This information is needed in order to design interventions to help align teachers' perceptions with current research findings, improve support for evidenced-based practice, enhance teachers' abilities to identify effective and ineffective initiatives, and address teacher concerns (See Figure 2). As such, the purpose of this study is to examine whether differences exist, as a function of demographic characteristics, in teachers' perceptions of what effect each factor (identified by Hattie within the Contribution of the School) has on student achievement outcomes. The study also aims to determine which teacher and school demographic characteristics predict perception alignment with the research. It is hypothesized that the demographic characteristics of the teachers and the schools they work in are the malleable mediators of teacher perceptions (of the factors that influence student achievement) and perception alignment with current research findings. The subsequent review of the literature will examine demographic characteristics related to the teachers and the schools they teach at, review Hattie's results with regard to contributions of the school, and explore the limited research on teachers' perceptions with regard to the importance of the school variables identified.

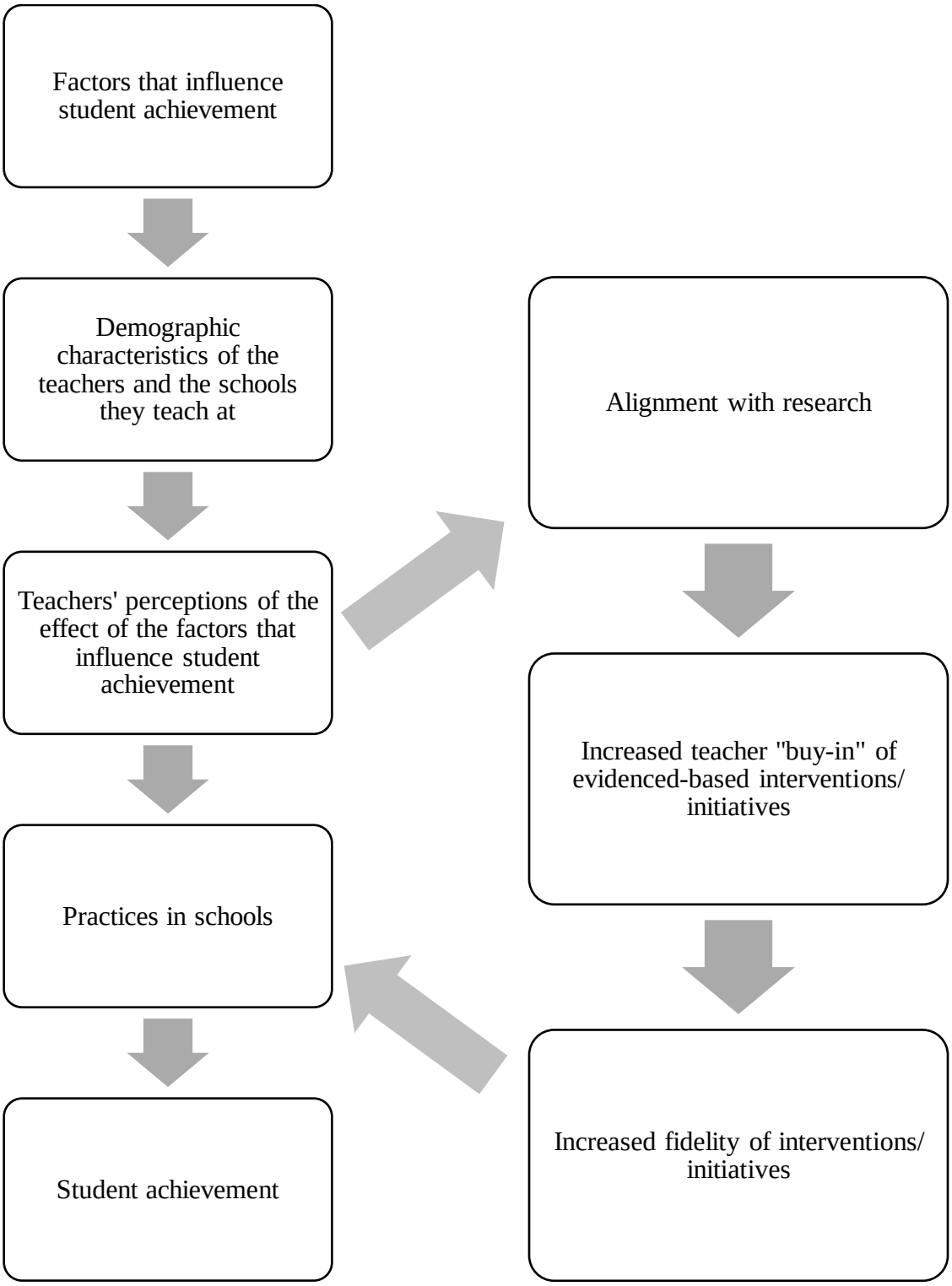

Figure 2: Theory of the Problem

CHAPTER 2: LITERATURE REVIEW

Demographic Characteristics

Characteristics of the teachers. Previous research has shown teacher perception regarding a variety of educational topics differ as a function of various characteristics of the teachers. Differences in teachers' perceptions as a function of the sex of the teacher include but are not limited to the following topics: school environment, technological pedagogical content knowledge, and students' temperament, educational competence, and teachability. Huang and Fraser (2009) discovered differences between male teachers and female Taiwan science teachers in their perceptions of school environment. Female science teachers in this study perceived greater collegiality among teachers, higher gender equity among students, and stronger professional interests. Conversely, male science teachers in the study perceived lower work pressure and better student-teacher relationships (Huang & Fraser, 2009). Mullola (2012) and colleagues found that teachers' perceptions of students' temperament, educational competence, and teachability varied as a function of teachers' gender and age, in addition to the gender of students. Other researchers found relationships between science teachers' perceptions of technological pedagogical content knowledge and the teacher demographic characteristics of teaching experience, gender, and age (Lin, Tsai, Chai, & Lee, 2013).

Differences in teachers' views based on teachers' race has also been noted in several studies. Pinkney and Esposito (1976) discovered differences in black and white teachers' perceptions of organizational climate factors of newly desegregated elementary schools. Differences have also been found between black and white teachers' perceptions of the black-

white achievement gap and social promotion (Uhlenberg & Brown, 2002). Additionally, racial differences have been uncovered for teachers' perceptions of students based on the race or ethnicity of the students (McGrady & Reynolds, 2013; Morris, 2005).

Teaching experience has been shown to influence teachers' perceptions regarding the following topics: challenging student behavior, ways to teach reading, technological pedagogical content knowledge, ability grouping, and retention. Alter, Walker, and Landers (2013) discovered that teachers' perceptions of challenging behaviors differed based on teacher gender, grade level taught, and years teaching. Other researchers found differences in teacher preferences related to ways to teach reading based on years of teaching experience (Giles & Tunks, 2015). As previous discussed, the work of Lin, Tsai, Chai, and Lee (2013) revealed relationships between science teachers' perceptions of technological pedagogical content knowledge and the teacher demographic characteristics of teaching experience, gender, and age. Ireson and Hallam (2001; 2003) found teacher views regarding ability grouping varied based on teacher experience and subject area taught.

Teachers' perceptions of the following topics have been shown to differ based on the grade levels taught by the teachers: teacher leadership, teamwork in inclusive classrooms, and challenging student behavior. Angelle and DeHart (2011) found that teacher perceptions of teacher leadership differed as a function of grade levels taught, teacher degree level, and formal leadership position status. Gebhardt, Schwab, Krammer, and Gegenfurtner, (2015) discovered differences between elementary and secondary school teachers' perceptions of teamwork in inclusive classrooms, with elementary teachers having more positive perceptions. As previously noted, the work of Alter, Walker, and Landers (2013) revealed teachers' perceptions of

challenging behaviors differed as a function of teacher gender, grade level taught, and years of teaching experience.

Research has also demonstrated teachers' perceptions related to the following topics vary based the type of education services provided by teachers: views of their own efficacy, ability, understanding, and resources. Buell, Hallam, Gamel-Mccormick, and Scheer (1999) found that general education and special education teachers differ in their views of their own efficacy, ability, understanding, and resources. Special education teachers rated themselves higher across the areas assessed than the general education teachers. Additionally, Troia and Maddox (2004) discovered that both special and general educators were strongly influenced by their teaching context.

Teachers' perceptions and attitudes regarding the following areas have also been found to vary based on the teachers' degree level: cooperative learning style, pedagogical categories, and teacher leadership. Rivas and Mateos (2016) discovered differences in physical education teachers' attitudes toward cooperative learning style based on the teachers' age and educational level. Other researchers, Akbari and Dadvand (2011), found that teachers with a master's degree had almost twice as many pedagogical thoughts than teachers with a bachelor's degree. This study also found master's level teachers had greater sensitivity for students' feelings and reactions, higher concern for teaching methodology, and higher frequency of self-reflection. Furthermore, teachers with a bachelor's degree were shown to give more attention to time issues than teachers with a master's degree. As previously discussed, Angelle and DeHart's (2011) work revealed that teacher perceptions of teacher leadership differed as a function of grade levels taught, teacher degree level, and formal leadership position status.

National certification status was found to be related to teacher perceptions and actions regarding the incorporation of developmental appropriate practices, retention, and mobility. McKenzie (2013) discovered that national board certified teachers perceived they used developmentally appropriate practices more frequently than did teachers who were not national board certified. Another researcher's work revealed that teacher perceptions of retention varied as a function of experience and certification (Okpala, 2007). Moreover, Goldhaber and Hansen's (2009) work with North Carolina teachers showed that national board certified teachers are more likely to leave the North Carolina School System and high-minority schools than non-national board certified teachers.

While there is no specific research demonstrating differences in teacher perceptions based on where teachers received their education, studies have demonstrated a difference in teacher quality based on teacher training programs (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009;Von Hippel, Bellows, Osborne, Lincove, & Mills, 2016). Hattie (2009) cited Arthur Levine who stated "There is no standard approach to where and how teachers should be prepared." Hattie (2009) also cited National Council on Teacher Quality President, Kate Walsh, who stated "the nation's leading teacher educators…concede that there is presently very little empirical evidence to support the methods used to prepare the nation's teachers." Curriculum in teacher training programs has been shown to vary by program as well (Buettner, Hur, Jeon, & Andrews, 2016; Goldhaber, Liddle, & Theobald, 2013). Furthermore, criteria for teacher certification varies by state. Therefore, it can be posited that teachers' perceptions related to factors that influence student achievement may differ as a function of where they received their teacher training education.

As demonstrated in the paragraphs above, teachers' perceptions have been shown to differ as a function of their individual characteristics. Therefore, it is reasonable to hypothesize these perception differences based on individual characteristics will also exist when examining their views related to the factors influencing student achievement.

Characteristics of the schools where teachers work. Researchers have discovered teachers' perceptions regarding a variety of topics and their actions vary based on characteristics of the schools they work in. Additionally, the types of teachers who work in a school have also been shown to vary based on school characteristics. Teachers' perceptions were found to vary on the following topics based on the type of school in which they teach: autonomy, satisfaction, and collective faculty trust. Oberfield (2016) observed that charter school teachers perceived greater autonomy than public school teachers. Researchers Renzulli, Parrott, and Beattie (2011) discovered that charter school teachers had greater satisfaction than traditional public school teachers due to greater autonomy. Though, charter school teachers were also more likely to leave the teaching profession than public school teachers. The work of McDaniel (2014) revealed that, of teachers with experience in both traditional public and charter schools, teachers perceived higher levels of collective faculty trust in charter schools compared to traditional public schools. Furthermore, charter schools were shown to typically hire more teachers from competitive undergraduate colleges than traditional public schools (Baker & Dickerson, 2006).

Researchers have uncovered differences in the instructional practices of teachers based on the Title 1 status of the schools where they are employed. Stichter, Stormont, and Lewis (2009) found differences in reading instructional practices between Title 1 and non-Title 1 schools. Title 1 school teachers used more non-instructional related communication, had more instructional down time, and increased numbers of student exits during instruction. In another

study, Stitchter and colleagues discovered differences between Title 1 teachers and non-Title 1 teachers in their use of opportunities to respond components for classroom management (Stichter, Lewis, Whittaker, Richter, Johnson, & Trussell, 2009). Title 1 teachers gave more negative verbal prompting and feedback. The Title 1 teachers also had smaller positive-to-negative-feedback ratios. Furthermore, researchers in a separate study found differences in the use of antecedent instructional practices between teachers in Title 1 and non-Title 1 schools (Stichter, Stormont, Lewis, & Schultz, 2009).

The location of schools has been shown to influence teacher beliefs, value orientations, feelings of stress and burnout, and attitudes towards students' communication style. Knoblauch and Chase (2015) found that student teacher efficacy beliefs varied as a function of the type of community where the school was located. Student teachers in urban schools had lower efficacy beliefs than student teachers in suburban schools. Urban student teachers had lower classroom management efficacy beliefs. Additionally, urban and rural student teachers had lower student engagement efficacy beliefs. In a separate study, Ennis and Chen (1995) discovered differences in teachers' value orientations between teachers in urban and rural schools. Urban teachers placed higher priority on self-actualization and social responsibility, while rural teachers placed higher priority on disciplinary mastery and learning process. The authors noted that "teachers appeared to shape their curriculum to reflect the opportunities and constraints within their school settings" (pp. 41). Researchers also found differences in the cause of teacher stress and burnout based on the type of community served (Abel & Sewell, 1999). Urban teachers experienced more stress than rural teachers from poor staff relations and working conditions. Moreover, rural teacher burnout was predicted by poor working conditions and time pressure, while urban teacher burnout was predicted by pupil misbehavior and poor working conditions. Nava Gomez

and Garcia (2012) also found regional differences in Texas elementary school teachers' attitude towards their students use code-switching in communication.

As demonstrated in the paragraphs above, teachers' perceptions have been shown to differ based on the characteristics of the schools they teach in. Therefore, it is reasonable to hypothesize these perception differences based on school characteristics will also exist when examining teachers' views related to the factors influencing student achievement.

Contributions from the School

Characteristics of the school that have been examined by educational researchers in relation to student academic achievement were organized by Hattie (2009) into the Contributions from the School category. These factors include attributes of the schools, school compositional effects, leadership, classroom compositional effects, school curriculum effects, and classroom influences. (See Appendix 1 for *d* and CLE values.)

Attributes of the schools. Attributes of the schools are comprised of school finances (*d* = 0.23; *CLE* = 16%) and types of schools (Hattie, 2009). School finances refer to the monetary resources available to a school and its students. Research has suggested that there is a significant positive correlation between school finances and student achievement (Cullen, Polnick, Robles-piña, & Slate, 2015; Drummond, 2010; Jackson, Johnson, & Persico, 2016; Jensen, 1984; Loubert, 2008; Miller-Whitehead, 2000; Tin-Chun 2010). However, Hanusek (2016) found that the amount of money spent is not significant in relation to student achievement, but rather how the money is spent significantly impacts student achievement. Hanusek (2013) stated that "the most promising school finance policies and institutions are ones that promote higher achievement (instead of simply providing more resources to schools)" (pp. 136). He pointed to performance incentives for teachers and school personnel as a potential way to change the school

finance structure. Hanusek also stressed the importance of the three interrelated institutional policies: promoting competition, autonomy in local decision making, and an accountability system.

One previous research study showed that only 25-26 percent of teachers believed that monetary rewards for teachers based on either individual performance or school-wide performance would have a strong impact on academic achievement (Scholastic & The Bill & Melinda Gates Foundation, 2012). However, the teachers expressed a need for tangible resources for students with behavioral issues, gifted students, students living in poverty, special education students, and English Language Learner (ELL) students in order to improve academic achievement (Scholastic & The Bill & Melinda Gates Foundation, 2012). Overall, through his synthesis of the literature, Hattie (2009) determined that school finances had a small positive effect on student academic achievement.

Desegregation (d = 0.28; *CLE* = 20%), religious schools (d = 0.23; *CLE* = 16%), summer schools (d = 0.23; *CLE* = 16%), and charter schools (d = 0.20; *CLE* = 14%) make up the subcategory of the types of schools. Desegregation refers to schools that do not racially segregate students. Studies have shown that desegregation has a positive effect on student achievement (Ascik, 1984; Jeneks & Brown, 1975). In a statement to the Supreme Court in the case of Parents v. Seattle School District and Meredith v. Jefferson County, Orfield, Frankenberg, and Garces (2008) presented research evidence that the desegregation of public schools benefits both students and the community. Orfield, Frankenberg, and Garces (2008) provided research documentation demonstrating that desegregation promotes cross-racial understanding, reduces racial prejudice, improves critical thinking skills, improves academic achievement, improves life opportunities, prepares students for a diverse workforce, reduces residential segregation, and

increases parent involvement in schools. Caldas, Bankston, and Cain (2007) found that 60 percent teachers in Lafayette, Louisiana believed that African American students would benefit from desegregation, while 11 percent believed that Caucasians students would be negatively impacted by desegregation. Additionally, 40 percent of teachers felt that desegregation had increased discipline problems in their schools (Caldas, Bankston, and Cain, 2007). Hattie (2009) determined that desegregation had a small positive effect on student achievement. The effect of desegregation on student achievement may be due to the increased opportunities provided (Hattie, 2009).

Religious schools are private schools run by a religious body. Studies have demonstrated that attending a religious school has a significant positive influence on student achievement (Jeynes, 2002). When compared to charter schools and public schools, students of private schools had greater academic achievement (Jeynes, 2012). Furthermore, African American children, Hispanic children, and children of low socioeconomic status achieved higher academic performance in religious schools than in public schools (Jeynes, 2002). Researchers have not examined teachers' perceptions of the influence of religious schools on student achievement. Hattie's (2009) synthesis demonstrated that religious schools had a small positive effect on student achievement. The central argument for the effectiveness of religious schools is that "these schools provide a safe and structured environment and academic rigor that leads to high levels of academic achievement for children placed at risk" (Fenzel, 2013, pp. 128). Additionally, the extended day and year of these schools provides needed support to assist students in advancing their academic skills (Fenzel, 2013).

Summer schools refer to supplementary and remedial educational instruction provided to students during the summer. Researchers have shown that summer school programs have a

positive influence on student achievement and help to prevent academic losses during the summer (Garland, & Garland, 2006; Koop, 2010; Zvoch, & Stevens, 2015). Research analyzing teachers' perspectives of the influence of summer school on student achievement has not been published. Overall, John Hattie (2009) found that summer school had a small positive effect on student achievement. Summer school is thought to improve student achievement "by providing more educational time for enrichment activities or for remedial education for children falling behind" (Matsudaira, 2013, pp. 164).

Charter schools are publically funded independent schools established under a charter with a local or national authority. Some educational researchers have shown that there is no difference in student achievement between charter schools and public schools (Bettinger, 2005; Hanushek Kain, Rivkin, & Branch, 2007). Other educational studies have shown that charter school students score higher on mathematics standardized achievement tests and some students show more rapids growth than public school students (Xiang & Tarasawa, 2015). However, researchers have yet to analyze teachers' views regarding the impact of charter schools on student achievement. Hattie (2009) concluded that charter schools had a small positive effect on student achievement. Due to less bureaucracy than traditional public schools, charter schools are thought to have more freedom to respond to the needs of students and provide greater opportunities for parent and student engagement with the school. Additionally, charter schools are seen as a potential venue to try innovative educational practices that could be later used in traditional public schools (Allen, 2013).

School compositional effects. The school compositional effects identified by Hattie (2009) include school size (d = 0.43; *CLE* = 30%), out-of-school curriculum experiences (d = 0.09; *CLE* = 6%), summer vacation (d = -0.09; *CLE* = -6%) and mobility (d = -0.34; *CLE* = -

24%). For the purpose of this research, school size is defined as the number of students attending a school. Research findings have been inconsistent when examining the effect of school size on student achievement (Luyten, Hendriks, & Scheerens, 2014). Crispin (2016) have found that students benefit from small and large schools, with their findings regarding this relationship being U-shaped. Other researchers have found that reading and math achievement decrease as school size increases (Egalite & Kisida, 2016). However, educational researchers have not examined teachers' perceptions of the influence of school size on student achievement. Overall, Hattie determined that school size had a medium positive effect on student achievement. This effect may be due to increased teacher collaboration, team teaching, and teacher input in decisions impacting their work, for schools with between 600 to 900 students. Additionally, schools with 600 to 900 students offered strong core curriculum to all students, with less use of electives to dilute the curriculum (Hattie, 2009).

Out-of-school experiences refer to students' educational experiences outside of the school or classroom setting. Research such as that of Lauer et al. (2006), as cited by Hattie (2009), and Tran (2011) suggested that out-of-school curriculum experiences have a positive impact on student achievement. Additionally, Knopf and his colleagues (2015) discovered that out-of-school academic programs had a positive influence on the academic achievement of at-risk students. Teachers participating in one survey expressed the belief that having opportunities for learning outside of the classroom and school would improve academic achievement (Love, 2010). Another study found that almost all of the science teachers perceived out-of-school experiences as increasing student academic success and decreasing student anxiety related to science (Yavuz & Kiyici, 2013). Science and technology teachers also stated that out-of-school experiences had positive effects on students' cognitive and affective development (Topalodlu &

Kiyici, 2015). Based on his compilation of the literature, Hattie (2009) concluded that out-of-school experiences have a very small positive effect on student achievement. Out-of-school experiences are thought to supplement and increase students' knowledge and skills learned in the classroom (Dillon, 2013).

Summer vacation refers to the time in which students do not attend school in the summer months. Studies have indicated that students may gain some reasoning skills but lose some academic skills during summer vacation (Nelson, 1929; Parsley & Powell, 1962). Other researchers have discovered decreases in mathematics problem solving ability and spelling accompanied by gains in reading ability as a result of summer vacation (Paechter et al., 2015). Helf, Konrad, and Algozzine (2008) also found student gains in reading over the summer vacation. Furthermore, only 31 percent of teachers surveyed thought that having a longer school year would have a positive impact on improving academic achievement (Scholastic & The Bill & Melinda Gates Foundation, 2012). Overall, Hattie (2009) determined that summer vacation had a very small negative effect on student achievement. Proponents of shortening summer vacation argue that "children learn best when learning is continuous, and the break means significant time needs to be spent reviewing previous material in order for learning to commence again" (Hattie, 2009, pp. 81).

Student mobility relates to how frequently students' change schools. Studies have shown that mobility has a negative impact on student achievement (Donnelly, 2010; Tanner-McBrien, 2010; Welsh, 2016). This negative impact effects the academic achievement for both the students who change school as well as their non-moving peers (Gibbons & Telhaj, 2011; Hanushek, Kain, & Rivkin, 2004; Whitesell, Stiefel, & Schwartz, 2016). While teachers understand that children usually do not have a choice in the matter of changing schools frequently, these students are

often seen as an inconvenience to the teachers (Costley, 2012). John Hattie's (2009) compilation showed that student mobility had a small negative effect on student achievement. It is thought that the instability related to student mobility negatively impacts students and teachers, as both parties need to adjust to new expectations with limited, if any, prior notice (Rose & Bradshaw, 2013).

Leadership. Leadership (d = 0.36; CLE = 25%) refers to the instructional and transformational leadership of the principals and other leaders of a school. Instructional leadership focuses on "creating a learning climate free of disruption, a system of clear teaching objectives, and high teacher expectations for teachers and students" (Hattie, 2009, pp. 83). Transformational leadership engages with "teaching staff in ways that inspire them to new levels of energy, commitment, and moral purpose such that they work collaboratively to overcome challenges and reach ambitious goals" (Hattie, 2009, pp. 83). Previous research has suggested that leadership has a significant positive influence on student achievement (Branch, Hanushek, & Rivkin, 2013; Miller, Goddard, Goddard, Larsen & Jacob, 2010; Karadag, Bektas, Cogaltay, & Yalcin, 2015; Soehner & Ryan, 2011). Dutta and Sahney (2016) found that transformational leadership behaviors had an indirect positive effect on student achievement, but principal leadership had no impact on student achievement. However, roughly 91 percent of teachers surveyed believed that having effective and engaged principals and building-level leaders would have a positive impact on student academic achievement (Scholastic & The Bill & Melinda Gates Foundation, 2012). Additionally, 67 percent of teachers thought greater collaboration between school leaders and teachers would have a significant impact on improving student academic achievement (Love, 2010). Overall, Hattie (2009) determined that principals and school leaders had a small positive effect on student achievement.

Classroom compositional effects. The classroom compositional effect category is comprised of small-group learning (*d* = 0.49; *CLE* = 34%), mainstreaming (*d* = 0.28; *CLE* = 19%), class size (*d* = 0.21; *CLE* = 15%), within-class grouping (*d* = 0.16; *CLE* = 11%), ability grouping (*d* = 0.12; *CLE* = 9%), multi-grade/multi-age classes (*d* = 0.04; *CLE* = 3%), open vs. traditional (*d* = 0.01; *CLE* = 0%), retention (*d* = -0.16; *CLE* = -11%), and single-sex classes. Small-group learning occurs when students are assigned to work in a small group to complete a task. This small-group learning is thought to promote cooperative learning, persistence, and self-esteem (Hattie, 2009). Participation in small-group learning has been shown to have a positive impact on student achievement (Barakat, 2005; Kamp, Dolmans, van Berkel, Henk & Schmidt, 2012). This positive effect on achievement extends into upper-level college courses (Gaudet, Ramer, Nakonechny, Cragg, & Ramer, 2010). However, no published research has examined teachers' perceptions of the influence of small group learning on student achievement. Hattie's (2009) synthesis found that small group learning had a medium positive effect on student achievement.

Mainstreaming refers to the practice of placing students with learning disabilities in regular education classrooms to provide the least restrictive environment for the students. The argument for mainstreaming has focused primarily on equity and social justice, rather than optimal academic achievement (Lindsay, 2013; Hattie, 2009). Due to the broad scope of disabilities influencing student learning, it is difficult for researchers to definitively state whether mainstreaming collectively has a positive influence on the achievement of all students with disabilities impacting their learning. Overall, it is agreed that the appropriate least restrictive environment should be determined on an individual basis, as age, type of disability, and severity of needs impact the effectiveness of mainstreaming (Lindsay, 2013). Researchers have

demonstrated that mainstreaming students with learning disabilities has a positive influence on student achievement (Madden & Slavin, 1982; Mitchell, 2010). Not only did mainstreaming have a positive impact on achievement, mainstreamed students also benefitted from improved social skills (Oh-Young & Filler, 2015). Furthermore, the achievement of non-disabled peers was not significantly impacted by the mainstreaming of their disabled peers (Sermier Dessemontet & Bless, 2013).

In regard to teachers' perceptions of mainstreaming, one study found that 47.5 percent, of the 138 Greek teacher participants, opposed the inclusion of students with complex learning disabilities in the general education classroom (Coutsocostas & Alborz, 2010). However, Monsen and Frederickson (2004) found that students of teachers with highly positive attitudes toward mainstreaming reported significantly higher classroom satisfaction and marginally lower classroom friction. As a result of his extensive review of the scientific literature, Hattie (2009) determined that mainstreaming had a small positive effect on student achievement.

Class size refers to the number of students in a given class. Studies have suggested that class size has an impact on student achievement, although the studies are inconsistent as to whether smaller or larger classes are preferable for students (De Paola, Ponzo, & Scoppa, 2013; Maples, 2009). Lower performing students benefitted the most from class size reduction compared to higher performing students (Bosworth, 2014; Diette & Raghav, 2015). Secondary mathematics teachers in Australia reported that class size was important to student performance (Handal, Watson, & Maher, 2015). Additionally, teachers participating in a separate study in the United States also stated that smaller class sizes would improve achievement. These teachers reported that they would ideally have only 20 students in their classes, but the current class average was 23 students. However, the teachers perceived that only after reaching 27 students in

their classrooms would academic achievement be negatively impacted (Scholastic & The Bill & Melinda Gates Foundation, 2012). Overall, Hattie (2009) concluded that class size had a small positive effect on student achievement. The primary argument related to the effect of class size on student achievement states that: "reducing class size leads to more individualized instruction, higher quality instruction, greater scope for innovation and student-centered teaching, increased teacher morale, fewer disruptions, less student misbehavior, and greater ease in engaging students in academic activities" (Hattie, 2013, pp. 131).

Within-class grouping involves teachers placing students into groups within the class based on their abilities. Some researchers have concluded that within-class grouping has a positive influence on student achievement (Lou, Abrami, & Spence, 2000; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). Furthermore, teachers in one study stated that they use within-class grouping to meet the instructional needs of their students (Chorzempa & Graham, 2006). However, more research is needed to examine teachers' perceptions of the influence of within-class grouping on student achievement. Based on his research, John Hattie (2009) determined that within-class grouping had a very small effect on student achievement. The central argument for the use of within-class group is that grouping students by their ability level allows for greater flexibility in learning objectives and learning pace in order to meet the individual needs of the students (Lou, 2013).

Ability grouping refers to the assignment of students to classes based on their abilities. Many studies have demonstrated that ability grouping positively influences student achievement (Adelson & Carpenter, 2011; Hoffer, 1992; Sexton, 2010; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). Conversely, other researchers have found small positive and negative effects, with the mean effect close to zero (Bygren, Sociologiska institutionen, Stockholms universitet, &

Samhällsvetenskapliga fakulteten, 2016). Moreover, researchers in several studies found that teachers positively viewed ability grouping (Ireson & Hallam, 2001; Hallam & Ireson, 2003). However, teacher views varied based on teacher experience and subject area taught (Ireson & Hallam, 2001; Hallam & Ireson, 2003). Additionally, Korean teachers in a separate study expressed concerns related to students' emotional well-being and reported mixed attitudes toward ability grouping (Kim, 2012). Overall, Hattie (2009) concluded that ability grouping had a very small positive effect on student achievement. The use of ability grouping is based on the belief that the achievement of all students will increase when "instruction, learning support, the curriculum, resources, teacher expertise, and so on, are targeted at students according to a similar ability level" (Baines, 2013, pp. 117). However, qualitative researchers have indicated that differences in teacher expectations for students based on ability grouping may be the casual mechanism for the effects demonstrated by ability grouping (Baines, 2013).

Multi-grade and multi-age classes are comprised of students of multiple different grades and ages in the same class. While some educational researchers have found that multi-grade/multi-age classes have a positive impact on student achievement (Lloyd,1999; Ong, Allison, & Haladyna, 2000; Truckey & Knill, 1965), others have discovered no effect on student achievement (Proehl, Douglas, Elias, Johnson & Westsmith, 2013; Veenman,1996). When asked about their views regarding multi-grade and multi-age classes, teachers reported negative views and preferred not to teach multi-grade and multi-age classes (Mason, D. A., & Burns, R. B. (1995). Hattie's (2009) synthesis of the research related to multi-grade and multi-age classes revealed that these classes had a very small positive effect on student achievement. While most multi-grade and multi-age classes are formed out of necessity due to low enrollment, there is a belief that students benefit from the diversity of these classrooms. Cooperative and collaborative

interactions between older and younger students, flexibility in grouping and learning styles, and individualized learning based on students' needs are thought to produce educational benefits for these students (Cornish, 2013; Hattie, 2009).

Open versus traditional refers to an individualized and flexible form of instruction using manipulative materials rather than the traditionally structured form of instruction. Open school programs using diagnostic evaluation, manipulatives, individualized instruction and emphasis on the role of the child in learning produced greater self-self-concept, creativity, and positive attitude toward school in their students. These schools are based on philosophical assumptions regarding the nature, development, and learning of students (Hattie, 2009). Wood (1978) found that open educational programs had a positive influence on student achievement. However, another educational researcher discovered that open educational programs had a negative impact on student achievement, but had a positive impact on creativity, self-concept, and attitude (Peterson, 1980). Educational researchers have not examined the perceptions of teachers related to the influence of open versus traditional instruction on student achievement. Overall, Hattie (2009) identified open educational programs as having a very small positive effect on student achievement.

Retention was defined by Hattie (2009) as "the practice of not promoting students up a grade level in school" (p. 97). Supporters of retention argue that retention allows students falling behind academically to catch up, assists emotionally immature students, and promotes academic homogeneity in classrooms. However, others argue that retention negatively impacts student achievement, student motivation, and self-concept (Jimerson & Brown, 2013). Several educational researchers have discovered that retention has a positive impact on student achievement (Bright, 2012; Griffith, Lloyd, Lane, & Tankersley, 2010; Mariano & Martorell,

2013). Conversely, other researchers have found that retention has negative influences on achievement (Diris, 2016; Garcia-Perez, Hidalgo-Hidalgo, & Robles-Zurita, 2014). Additionally, one German study found retention had no impact on student achievement, but improved self-concept in mathematics (Ehmke, Drechsel, & Carstensen, 2010). Researchers discovered that teachers viewed retention positively and believed that retention prevents future failure (Okpala, 2007; Range, Pijanowski, Holt, & Young, 2012) In one study, teacher perceptions varied as a function of experience and certification (Okpala, 2007). As a result of his extensive review of the literature, Hattie (2009) determined that retention had a very small negative effect on student achievement.

Upon his review of the meta-analyses related to single-sex classes, Hattie (2009) was unable to determine the effect of single-sex classes on achievement. Unfortunately, any effects related to achievement were attributed to either the gender of the teacher or teacher expectations. Furthermore, there is a lack of research regarding teachers' perspectives of the influence of single-sex classes on student achievement.

School curriculum effects. School curriculum effects include acceleration (d = 0.88; *CLE* = 62%), enrichment (d = 0.39; *CLE* = 28%), and ability grouping for gifted students (d = 0.30; *CLE* = 21%). Acceleration is a program designed to allow students to accelerate through the curriculum in order to work on tasks that match their abilities. Acceleration is thought to promote academic achievement by allowing students to work alongside their intellectual peers and progress through academic content at their own rate (Hattie, 2009). Research studies have demonstrated that acceleration improves student achievement (Ma, 2005; McClarty, 2015; Shayer, 1997; Steenbergen-Hu, Makel, & Olszewski-Kubilius, 2016). Finau, Treagust, Won, and Chandrasegaran, (2016) discovered that a cognitive acceleration program in mathematics not

only had a positive impact on student math achievement, but also improved student motivation and self-regulation. German teachers in another study demonstrated moderate support for skipping grades and gave great consideration to possible implications on the students' academic, motivational, and social development (Westphal, Vock, & Stubbe, 2017). Other research studies have not explicitly examined teachers' perceptions regarding the influence of acceleration programs on student achievement. John Hattie (2009) concluded that acceleration had a large positive effect on student achievement.

For his synthesis, Hattie (2009) defined enrichment as involving "activities meant to broaden the educational lives of some group of students" (p. 101). Enrichment is thought to promote academic achievement by increasing critical thinking skills (Hattie, 2009). Research has established that enrichment has a significant positive effect on student achievement (Fakolade & Adeniyi, 2010; Martin & Others; 1981). Additionally, several studies have discovered that in addition to improving academic achievement, enrichment also had a positive effect on socioemotional development (Kim, 2016; Kaul, Johnsen, Witte, & Saxon, 2015; Gubbels, Segers, & Verhoeven, 2014). Researchers have not analyzed teachers' perspectives related to the influence of enrichment on student achievement. Overall, Hattie (2009) determined that enrichment had a small positive effect on student achievement.

Ability grouping for gifted students refers to the practice of assigning students to classes based on their giftedness in order to provide them with a more challenging curriculum. In this type of ability grouping, gifted students are given specific curriculum with the purpose of challenging these students at the appropriate level to promote engagement and learning (Hattie, 2009). The practice of ability grouping has been reported to have a substantial impact on student achievement (Balzer, 1991; Hendricks, 2009; Steenbergen-Hu, Makel, & Olszewski-Kubilius,

2016). Furthermore, ability grouping for gifted students improved their social self-concept of acceptance, increased their interest in school, and improved their student-teacher relationships (Vogl & Preckel, 2014). Though there is limited research examining teacher perceptions, Jung (2014) found that teachers with a low power distance orientation, who had contact with gifted individuals, and were older, had more positive views of gifted programs. Based on his synthesis, Hattie (2009) identified ability grouping for gifted students as having a medium positive effect on student achievement.

Classroom influences. Classroom influences that have been researched in relation to student achievement include: group cohesion (d = 0.53; *CLE* = 38%), peer influences (d = 0.53; *CLE* = 37%), classroom management (d = 0.52; *CLE* = 37%), and decreasing disruptive behavior (d = 0.34; *CLE* = 24%). Group cohesion is "the sense that all (teachers and students) are working towards positive learning gains" (Hattie, 2009, p. 103). Group cohesion promotes "co-peer learning, tolerance and welcoming of error and thus increased feedback, and more discussion of goals, success criteria, and positive teacher-student and student-student relationships" (Hattie, 2009, pp. 103). Researchers have demonstrated that group cohesion has a positive impact on student performance (Beal, Cohen, Burke, & McLendon, 2003; Evans & Dion, 2012; Greer, 2012). Hattie cited Mullen and Copper (1994), who found that the relationship between group cohesion and performance was stronger in smaller classroom groups than larger classroom groups. While many studies have explored the relationship between group cohesion and performance, researchers have not yet examined teachers' perceptions of this relationship. Hattie (2009) concluded that group cohesion in the classroom had a medium positive effect on student achievement.

Peer influences refer to how a student's peers may influence the student's academic performance. Peer interactions are thought to expose students to specific processes such as support, instruction, exclusion, and conflict (Ladd, 2013). Experiences with each of these processes influences a student's academic achievement. Some research has indicated that peer influences have a significant impact on student achievement (Darensbourg & Blake, 2014; Hanushek, Kain, Markman, & Rivkin, 2003; Stewart, 2008; Wang & Neihart, 2015). However, other studies have demonstrated that whether the impact is positive or negative may be determined by the gender and other demographic characteristics of the students (Gottfried, 2014; Ullah & Mardell, 2007). Educational researchers have not specifically investigated the perspectives of teachers related to the effect of peer influences on student achievement. Overall, Hattie (2009) found that peer influences have a medium positive effect on student achievement.

Classroom management refers to the strategies a teacher uses to maintain a classroom environment conducive to learning. Teachers with effective classroom management develop caring and supportive relationships with and among students, organize and implement instruction to optimize students' access to learning, use group management methods that encourage students' engagement in academic tasks, promote the development of students' social skills and self-regulation, and use appropriate interventions to assist students with behavior problems (Poole & Evertson, 2013). Classroom management strategies have been reported to have a significant positive effect on student achievement (Adeyemo, 2013; Back, Polk, Keys, & McMahon, 2016; Freiberg, Huzinec, & Templeton, 2009). However, the impact of classroom management strategies may differ due to student characteristics. For example, one study found that higher-quality classroom management during the first four years of school had a significant positive impact on student achievement for boys with emotional and behavioral disorders, but

had no significant effect on girls with emotional and behavioral disorders (Garwood, Vernon-Feagans, & Family Life Project Key Investigators, 2017). While there is a lack of available research specifically analyzing teachers' views related to the influence of classroom management on student achievement, research has shown that teachers' beliefs regarding classroom management vary significantly (Evertson & Weinstein, 2006). Hattie's synthesis (2009) revealed that classroom management strategies had a medium positive overall effect on student achievement.

From a theoretical framework, decreasing disruptive student behavior in the classroom should positively impact student achievement, as this would provide more time for focused-engagement on educational tasks. This is evident as classroom behavioral interventions that have decreased disruptive behavior also increased academic engagement (McHugh, Tingstrom, Radley, Barry, & Walker, 2016; Radley, Dart, & O'Handley, 2016). Furthermore, studies such as Thompson (2013) have indicated that disruptive behavior has a significant negative impact on student achievement for all students in the classroom. While research has not explicitly analyzed teachers' perspectives related to the influence of decreasing disruptive behavior on student academic achievement, other studies have examined teachers' views regarding disruptive behavior. Some research studies have found consistency in teachers' perceptions of disruptive student behaviors (Crawshaw, 2015), while other have found variation (ThankGod, 2016). Overall, John Hattie determined that decreasing disruptive behavior had a small positive effect on student achievement.

Summary of school contributions. Hattie (2009) identified the following school variables to as having a negative effect on student achievement: summer vacation, mobility, and retention. Minimal positive effects were recognized for out-of-school experiences, within-class

grouping, ability grouping, multi-grade/multi-age classes, and open vs. traditional school contributions. Small positive effects on student achievement were found for finances, desegregation, religious schools, summer schools, charter schools, leadership, mainstreaming, class size, and decreasing disruptive behavior. The following school contributions were determined to have medium positive effects on student achievement: school size, small-group learning, group cohesion, peer influences, and classroom management. Only one contribution from the school, acceleration, was concluded to have a large positive effect on student achievement. Though a significant amount of research has examined these school contributions as they related to student achievement, few studies have examined the influence teachers perceive any of these factors to have on student achievement or have examined differences in teachers' perceptions.

CHAPTER 3: STATEMENT OF PURPOSE

A substantial body of research has examined student achievement over the years. John Hattie synthesized over 800 meta-analyses related to student achievement in a practical and intelligible manner, in order to make this information readily available to educational researchers, school personnel, and other education stakeholders. Though this research is vast, there is no indication that the findings are being used in schools and classrooms. Hattie (2009) expressed concern regarding the research to practice gap in schools.

Due to the unique opportunity teachers have to impact student achievement, their knowledge of and perceptions related to the factors that influence student achievement are important. When teachers' perceptions align with the research findings, students may be educated in the most effective manner possible. Therefore, the primary purpose of conducting this research was to gather information regarding whether teachers' perceptions of the effect of each factor on student achievement are significantly discrepant from the research, differ as a function of demographic characteristics, and which demographic characteristics predict perception alignment with research findings. Understanding differences in teachers' perceptions is crucial to designing and implementing evidence-based interventions, acquiring teacher support, and addressing their concerns as key stakeholders. The following research questions will be explored in this study:

1. Do teachers' perceptions align with current research regarding the effect factors contributed by the school have on student achievement?

2. Do differences exist among teachers' perceptions based on the demographic characteristics of the teachers and schools they teach in?
3. What demographic characteristics predict perception alignment with current research regarding the effect factors contributed by the school have on student achievement?

CHAPTER 4: METHODS

Participants

For this study, participants were solicited from teacher organizations willing to participate in a web-based survey to measure perceptions of factors that influence student academic achievement. Participants in this study include teachers working with pre-kindergarten through high school students in the United States. Three hundred seventy national, state, and local teacher organizations were contacted regarding their willingness to distribute the survey information and link to their members. Twenty-one teacher organizations distributed the survey information to their members via email/listserv, website posts, and/or based on the organizations' preferences.

Participants included 651 current teachers. Of the sample, 80% (N=518) were female, 19% (N=125) were male, and 1% (N=8) preferred not to answer. The mean years of teaching experience for the participants was 17 years. Regarding race or ethnicity, 84% (N=548) were White, 4% (N=24) were Black or African American, 0.5% (N=3) were American Indian or Native American, 4% (N=23) were Asian, 0.6% (N=4) were Native Hawaiian or Pacific Islander, 2% (N=14) were biracial or multiracial (i.e., two or more races), 2% (N=12) identified as Other, and 4% (N=23) preferred not to answer. Of note, race/ethnicity categories were based on those used by the U.S. Census Bureau. Thirteen percent (N=87) of the participants had 0-5 years of experience, 18% (N=120) had 6-10 years of experience, 21% (N=138) had 11-15 years of experience, 16% (N=105) had 16-20 years of experience, 13% (N=85) had 21-25 years of

experience, 9% (N=56) had 26-30 years of experience, and 9% (N=60) had more than 30 years of experience. Related to their educational backgrounds, the majority of the participants (79%, N=514) held advanced degrees. Specifically, 0.2% (N=1) held a High School Diploma or General Equivalence Degree, 0.2% (N=1) held an Associate's Degree, 21% (N=135) held a Bachelor's Degree, 65% (N=421) held a Master's Degree, 7% (N=42) held a Specialist Degree, and 8% (N=51) held a Doctorate Degree. Twenty-two percent (N=144) of the participants earned their highest degree in the Northeast region of the United States, 34% (N=221) in the South, 30% (N=192) in the Midwest, and 14% (N=94) in the West. Regions are based off the Census regions used by other educational research such as the National Assessment of Educational Progress, which can be found on the National Center for Education Statistics website. Of the participants, 12% (N=80) were Nationally Certified Teachers, while the majority (88%, N=571) were not Nationally Certified Teachers. Four percent (N=25) of the participants currently teach Pre-Kindergarten, 17% (N=113) currently teach elementary school grades (i.e., Kindergarten through 4th Grade), 38% (N=224) currently teach middle school grades (i.e., 5th Grade through 8th Grade), and 58% (N=375) currently teach high school grades (i.e., 9th Grade through 12th Grade). Additionally, 10% (N=62) of the participants have previously taught Pre-Kindergarten, 32% (N=209) have previously taught elementary school grades, 63% (N=410) have previously taught middle school grades, and 62% (N=402) have previously taught high school grades.

In regard to the places in which participants teach, 79% (N=511) teach in traditional public schools, 6% (N=39) teach in charter schools, 2% (N=13) teach in magnet schools, 7% (N=47) teach in non-religious private schools, and 6% (N=41) teach in religious private schools. The majority of the participants (49%, N=321) teach in Title 1 Schools, while 44% (N=287) do not teach in Title 1 Schools and 7% (N=43) did not know if their school was a Title 1 School.

Forty-one percent (N=265) of participants teach in suburban areas, 29% (N=187) teach in urban areas, 30% (N=194) teach in rural areas, and 0.8% (N=5) were unsure how to classify the area in which they teach. Nineteen percent (N=122) of the participants teach in the Northeast region of the United States, 39% (N=256) in the South, 27% (N=176) in the Midwest, and 15% (N=97) in the West.

Materials

The online survey provider, Qualtrics, was be used to create a survey for this research. The Teachers' Perceptions of School Factors that Influence Student Achievement Survey is a survey that was designed to gauge teachers' perspectives regarding the school factors that influence student academic achievement (See Appendix 3). The survey first provided participants with an overview of the survey questions, information about informed consent, and who to contact if they had any questions about the survey results. The survey gathered information on participant demographics and their perceptions of the influence of each factor on student academic achievement. The following subheadings will describe each of these in more detail.

Demographic information. Demographic information was gathered to help describe the sample in the study and identify differences in perceptions. Participants were asked to identify their sex, race, how many years of experience they had in teaching, what grades they teach, what type of educational services they provide (e.g., Regular Education, Special Education, Specialized Instruction Program), what type of school they teach in, what type of community their school serves, if their school is a Title 1 school, what state they teach in, the highest degree they hold, in what state they earned their degree, and whether they have national certification.

These demographic questions were used as demographic variables for the participants and the schools they teach in.

Perceptions of influence. Participants were asked to rate the influence each of the school factors, discussed by Hattie (2009), has on student achievement. The factors were grouped within the subcategories examined (Attributes of the School, School Composition Effects, Classroom Composition Effects, School Curriculum Effects, and Classroom Influences) and included a brief definition to increase the likelihood that participants are conceptualizing the factor in the way that it was discussed in the literature review. A three-point Likert-style rating system (1= Negative Effect, 2 = No Effect, 3 = Positive Effect) was used for each item, with participants responding to "what effect does each factor have on student academic achievement?". Additionally, for the factors endorsed as having a positive effect or negative effect, participants were asked, on average, what percent of students they perceive to be positively or negatively affected by each factor. This percentile was compared to the common language effect size (CLE) generated by Hattie (2009) for each school factor to determine teacher perception alignment with current research. The reliability of the instrument was tested using Cronbach's alpha coefficient and found to have a Cronbach's alpha coefficient of 0.701.

Procedure

Institutional Review Board (IRB) approval was obtained from the University of North Carolina Institutional Review Board. A pilot test was completed by using school psychology students at the University of North Carolina. The participants were asked to evaluate the survey with regard to readability, flow, and ease of understanding. Time required to complete the survey was monitored during the pilot testing. The average time completion time was 12 minutes. Participants reported the questions and rating system were easily understood, while

providing suggestions for improving definitions for certain items. Based on information gathered from this pilot test, the survey was slightly adapted to add greater detail to the definitions of certain factors and to add an instructions reminder prompt prior to the questions involving teachers' perceptions.

Teacher organizations were contacted with regard to their willingness to distribute survey information to their members. The survey was then sent out electronically to all teachers within participating organizations via email/listserv, websites posts and/or social media based on the preferences of the organizations. Informed consent was obtained as part of the survey, before participants viewed any survey questions. Due to initial difficulty obtaining responses from organizations, the survey remained open for 7 months. As an incentive for teachers to complete the survey, participants that completed the survey had the opportunity to enter into a gift card drawing by following the link at the end of the survey. The link brought participants to a separate survey where they could submit their email address to be entered into the gift card drawing for one of twelve $25 gift cards.

The Statistical Package for the Social Sciences (SPSS) version 25.0 was used for data analysis. A summary of the variables analyzed in the study are presented in Appendix 2. Pairwise exclusion was used for t-tests, while listwise exclusion was used in the regression analysis.

CHAPTER 5: DATA ANALYSIS

Descriptive, t-test, and multiple regression analyses were used to examine the alignment of teachers' perceptions with current research regarding the influence each school factor has on student achievement. Descriptive summary statistics were tabulated for all responses. The following variables were regrouped due to the number of participants in each group, to meet specification requirements for analyses tools utilized, and to ensure generalizability: race or ethnicity, state where participant currently teaches, state where participant earned highest degree, grade(s) currently teach, and grade(s) previously taught. For race or ethnicity, the following groups were collapsed into 1 group label "Other": American Indian or Native American, Native Hawaiian or Pacific Islander, Two or More Races, and Other. The states were regrouped into regions based on those used by the U.S. Census Bureau and other educational research such as the National Assessment of Educational Progress (National Center for Educational Statistics, 2007) (See Table 1). Grades were regrouped into pre-kindergarten, elementary school grades (kindergarten through 4th grade), middle school grades (5^{th} though 8^{th} grade), and high school grades (9^{th} through 12^{th} grade). Additionally, High School Diploma or General Equivalence Degree and Associate's Degree were not included as groups for the Highest Degree earned in the remaining analyses due to only 1 participant being represented by each group. Further analyses used to address each research question are discussed in the subsequent sections.

Table 1: Regions of the United States as defined by U.S. Census Bureau	
Northeast	Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont

Table 1: Regions of the United States as defined by U.S. Census Bureau	
South	Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia
Midwest	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin
West	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming

Since the attrition rate for the survey was relatively high, (786 opened the survey link, 651 began the survey, but only 437 completed the final item), preliminary analysis examined demographic differences between starters and finishers to determine if there were significant differences between the groups. There was not a statistically significant difference between starters and finishers with regard to sex (c^2=2.51, p=0.11), race or ethnicity (c^2=12.65, p=0.08), highest degree completed (c^2=3.837, p=0.28), region in which highest degree was completed (c^2=1.55, p=0.67), educational service provided (c^2=3.01, p=0.22), national certification (c^2=0.34, p=0.56), school type (c^2=3.64, p=0.46), region in which currently teach (c^2=1.32, p=0.72), community in which school is located (c^2=0.13, p=0.94), and Title 1 status (c^2=0.62, p=0.43). However, there was a very small correlation (r=0.09, p=0.012) between years of experience and full completion of the survey.

During preliminary analyses and the data cleaning process, a survey flow error was discovered which led to missing data related to School Compositional Effects variables including: Mobility, Summer Vacation, Out-of-School Curriculum Experiences, and School Size. All participants were appropriately presented with the primary level question for each variable, asking participants to identity each factor as having a negative effect, no effect, or positive effect on student achievement. This data remains intact. The survey flow error resulted in the inconsistent presentation of the secondary level question related to what percent of

students are affected by each factor. Therefore, these variables could not be included in overall teacher alignment analyses.

Primary data related to the effect of each School Compositional Effects factor show that the majority of participants (90%, N=401) correctly identified student mobility as having a negative impact on student achievement, with 6% (N=25) identifying mobility as having no effect and 4% (N=4) as having a positive effect. Of the sample, 81% (N=361) accurately categorized out-of-school curriculum experiences as having a positive effect on student achievement, though 13% (N=56) labeled these experiences as having no effect and 6% (N=27) as having a negative effect. For school size, only 35% (N=156) accurately categorized school size as having a positive effect, 48% (N=48) determined no effect and 17% (N=75) classified school size as having a negative effect. Summer vacation was accurately rated by 39% (N=173) of participants as having a negative effect on student achievement, while 31% (N=136) rated summer vacation as having no effect and 30% (N=135) rated summer vacation as having a positive effect.

Teachers perceptions related to single-sex class also could not be included in overall teacher alignment analyses. While Hattie (2009) did not provide a common language effect size for single-sex classes, he stated that "there is very little compelling evidence of a compositional effect related to whether a class is single- or mixed-sex" (p.97). Based on their mean ratings, teachers' perceptions are relatively align with this conclusion. Collectively, teachers rated single-sex classes as having a positive effect on 1.5% of students on average.

To prepare the data for analysis, data from the survey question "what effect does each factor have on student academic achievement?" and the question regarding what percent of students do the teachers perceive to be positively or negatively affected by each factor were

combined to determine teachers' perception of the influence each factor has on student achievement. Teachers' ratings of factors having a negative effect, no effect, or positive effect provided information regarding the direction of the effect. The percent of students effected provided information regarding the level of influence of the effect. For example, a rating of a negative effect and a rating of 50% of students effected is combined to show 50% of students are negatively affected by the factor. A rating of a positive effect and a rating of 50% of students effected is combined to show 50% of students are positively effected by the factor. For factors rated as having no effect, the item is automatically coded as affecting 0% of students. This procedure generated a variable for each teacher's perception of the effect of each factor.

Analysis for Research Question 1:

Do teachers' perceptions align with current research regarding the effect factors contributed by the school have on student achievement?

A paired-samples t-test was completed to examine whether differences exist between teachers' perceptions and the current research finding regarding the influence of each factor related to student achievement. For this analysis, the average for teachers' perceptions of the percent of students affected by each contribution of the school was compared to the corresponding common language effect size for each contribution of the school from Hattie's (2009) research. Based on previous research, it was hypothesized there would be a statistically significant discrepancy between teachers' perceptions and the common language effect sizes from Hattie's (2009) research findings for each contribution from the school. Mean differences between teachers' perceptions and the common language effect sizes were generated as part of the t-tests. These means represent the average teacher perception alignment with current research

(common language effect sizes determined by Hattie's research) for each factor. The factors were examined to determine the factors for which teacher alignment was least and greatest.

Analysis for Research Question 2

Do differences exist among teachers' perceptions based on the demographic characteristics of the teachers and schools they teach in?

A hierarchical multiple regression was used to determine whether differences in perception exists between groups based on demographic characteristics of teachers and the schools they teach in. Dummy variables were generated for all categorical variables. Average perception alignment variables were generated for each participant. For this analysis, the demographic characteristics of teachers and the schools they work in were the independent variables and the average teacher perception alignment variable was the dependent variable. It was hypothesized that teacher demographic variables and school demographic variables would each demonstrate statistically significant influence in predicting teacher perception alignment.

Due to the number of variables and the tendency for different school characteristics to attract teachers with specific demographic characteristics, hierarchical multiple regression was conducted by using the predictor variables in the block order demonstrated in Table 2. This block order allows for teacher characteristics to be controlled for when examining the impact school characteristics have on teacher perception alignment with current research. Refer to Figure 3 for the regression model. The regression equation is as follows, where k represents the number of independent variables and β represents the parameters or regression weights for each variable:

$$Y_i' = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \ldots + \beta_k X_{ki}.$$

Table 2: Hierarchical Multiple Regression Block Order	
Block 1	Teacher Characteristics: • Sex (Male, Female)

Table 2: Hierarchical Multiple Regression Block Order	
	• Race or Ethnicity (White, Black or African American, Asian, Other) • Years of teaching experience • Highest degree earned (Bachelor's Degree, Master's Degree, Specialist Degree, Doctorate Degree) • Region where highest degree was earned (Northeast, South, Midwest, West) • Grade(s) taught (Pre-Kindergarten, Elementary School Grades, Middle School Grades, High School Grades) • Grade(s) currently teach (Pre-Kindergarten, Elementary School Grades, Middle School Grades, High School Grades) • Educational services provided (Regular Education, Special Education, Specialized Instruction, National certification status)
Block 2	School Characteristics: • School type (Traditional Public, Charter, Magnet, Non-Religious Private, Religious Private • Community type (Urban, Suburban, Rural) • Region currently teach in (Northeast, South, Midwest, West) • Title 1 status

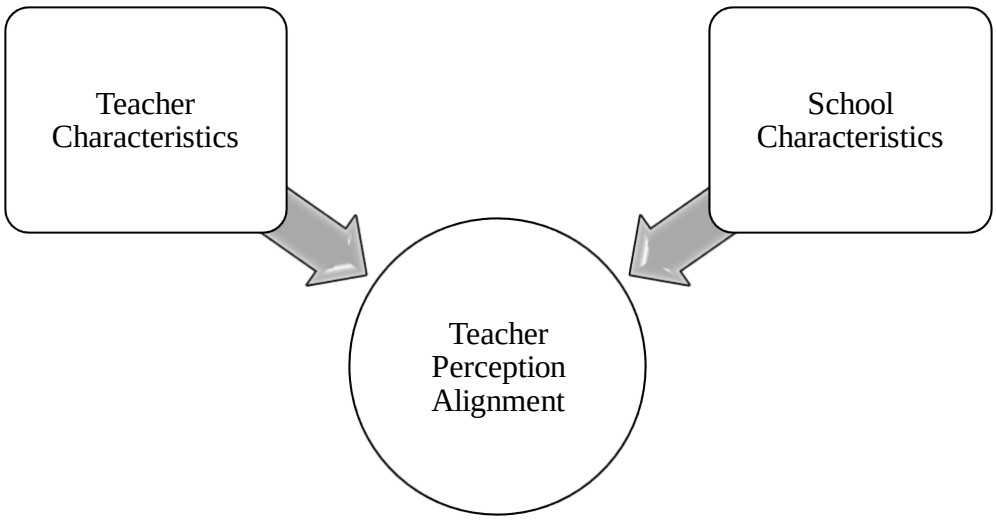

Figure 3: Model for Hierarchical Multiple Regression

Analysis for Research Question 3

What demographic characteristics predict perception alignment with current research regarding the effect factors contributed by the school have on student achievement?

The previously discussed hierarchical multiple regression was used to determine which demographic characteristics predict teacher perception alignment with current research. Beta coefficients were examined to determine which individual demographic characteristics predict perception alignment with current research. It was hypothesized that the characteristic of teachers holding advanced degrees (master's degree, specialist degree, and doctorate degree) would be the greatest predictors of perception alignment with the current research. This is because advanced degrees usually require the completion of additional statistics courses and emphasize research practices throughout the required coursework.

CHAPTER 6: RESULTS

The distribution of participants by demographic category are presented below in Tables 3 – 11. The descriptive statistics of study variables are presented below in Table 12.

Table 3: Distribution of Sex of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	125	15.9	19.4	19.4
	Female	518	65.9	80.6	100.0
	Total	643	81.8	100.0	
Missing	Prefer not to answer	8	1.0		
	System	135	17.2		
	Total	143	18.2		
Total		786	100.0		

Table 4: Distribution of Race of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	548	69.7	87.3	87.3
	Black or African American	24	3.1	3.8	91.1
	Asian	23	2.9	3.7	94.7
	Other	33	4.2	5.3	100.0
	Total	628	79.9	100.0	
Missing	System	158	20.1		
Total		786	100.0		

Table 5: Distribution of Highest Degree Earned for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's Degree	135	17.2	20.8	20.8
	Master's Degree	421	53.6	64.9	85.7
	Specialist Degree	42	5.3	6.5	92.1
	Doctorate Degree	51	6.5	7.9	100.0
	Total	649	82.6	100.0	
Missing	High School Diploma/GED	1	.1		
	Associate's Degree	1	.1		
	System	135	17.2		
	Total	137	17.4		
Total		786	100.0		

Table 6: Distribution of the Region Where Highest Degree was Earned for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Northeast	144	18.3	22.1	22.1
	South	221	28.1	33.9	56.1
	Midwest	192	24.4	29.5	85.6
	West	94	12.0	14.4	100.0
	Total	651	82.8	100.0	
Missing	System	135	17.2		
Total		786	100.0		

Table 7: Distribution of Education Services Provided for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Regular Education	574	73.0	88.2	88.2
	Special Education	28	3.6	4.3	92.5
	Specialized Instruction	49	6.2	7.5	100.0
	Total	651	82.8	100.0	
Missing	System	135	17.2		
Total		786	100.0		

Table 8: Distribution of Nationally Certified for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	571	72.6	87.7	87.7
	Yes	80	10.2	12.3	100.0
	Total	651	82.8	100.0	
Missing	System	135	17.2		
Total		786	100.0		

Table 9: Distribution of Region Where Currently Teach for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Northeast	122	15.5	18.7	18.7
	South	256	32.6	39.3	58.1
	Midwest	176	22.4	27.0	85.1
	West	97	12.3	14.9	100.0
	Total	651	82.8	100.0	
Missing	System	135	17.2		
Total		786	100.0		

Table 10: Distribution of Community Type for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	187	23.8	28.9	28.9
	Suburban	265	33.7	41.0	70.0
	Rural	194	24.7	30.0	100.0
	Total	646	82.2	100.0	
Missing	Do Not Know	5	.6		
	System	135	17.2		
	Total	140	17.8		
Total		786	100.0		

Table 11: Distribution of Title 1 School Status for Participants					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	287	36.5	47.2	47.2
	Yes	321	40.8	52.8	100.0
	Total	608	77.4	100.0	
Missing	Do Not Know	43	5.5		
	System	135	17.2		
	Total	178	22.6		
Total		786	100.0		

Table 12: Descriptive Statistics for Study Variables					
	N	Minimum	Maximum	Mean	Std. Deviation
Experience	651	0	60	16.65	10.332
Teach PreK	786	0	1	.03	.176
Teach Elementary	786	0	1	.14	.351
Teach Middle	786	0	1	.31	.463
Teach High	786	0	1	.48	.500
Taught PreK	786	0	1	.08	.270
Taught Elementary	786	0	1	.27	.442
Taught Middle	786	0	1	.52	.500
Taught High	786	0	1	.51	.500
TP Leadership	543	-100	100	46.30	52.278
TP Finances	501	-100	100	46.89	63.011
TP Desegregation	502	-100	100	47.00	59.794
TP Religious Schools	504	-100	100	6.19	48.474
TP Summer School	500	-100	100	32.78	43.370
TP Charter Schools	504	-100	100	-8.88	53.672
TP Ability Grouping	464	-100	100	36.55	56.104
TP Reducing Class Size	464	-100	100	84.59	28.955
TP Mainstreaming	467	-100	100	21.26	60.270
TP Multi-Grade/Multi-Age Classes	469	-100	100	6.79	57.461
TP Open vs. Traditional Classes	467	-100	100	36.02	52.600
TP Retention	466	-100	100	6.13	58.383
TP Small Group Learning	464	-80	100	70.67	34.469
TP Within Class Grouping	466	-100	100	42.28	55.416

Table 12: Descriptive Statistics for Study Variables					
	N	Minimum	Maximum	Mean	Std. Deviation
TP Classroom Management	447	-50	100	87.08	22.195
TP Decreasing Disruptive Behavior	447	-100	100	86.94	26.114
TP Group Cohesion	447	-81	100	81.23	28.402
TP Peer Influences	447	-100	100	47.67	55.609
TP Ability Grouping for Gifted Students	437	-100	100	45.87	48.587
TP Acceleration	437	-100	100	49.89	46.075
TP Enrichment	437	-100	100	67.18	36.309

Research Question 1

Do teachers' perceptions align with current research regarding the effect factors contributed by the school have on student achievement?

A paired-samples t-test was completed to examine whether differences exist between teachers' perceptions and the current research finding regarding the influence of each factor related to student achievement. For this analysis, teachers' perceptions for the average percent of students affected by each contribution of the school was compared to the corresponding common language effect size for each contribution of the school from Hattie's (2009) research. Results from the paired-samples t-test indicate a statistically significant difference between teachers' perceptions and current research findings for all of the factors ($p < 0.001$) except for mainstreaming ($p=0.419$) and multi-age/multi-grade classes ($p=0.154$) (See Table 14).

Means for each alignment variable were generated as part of the paired-samples t-test results and used to provide information regarding for which contributions of the school the teachers' perception alignment with Hattie's (2009) findings is least and greatest. The number of cases used in the t-tests was determined on a pairwise basis. The alignment variable measures the distance of the teachers' perceptions from the current research findings. As a result, lower values

indicate greater alignment. Based on the mean alignment for each factor, teacher perception alignment with current research was greatest for the Mainstreaming factor (M=2.26) and least for the Reducing Class Size factor (M=69.60). Teacher perception alignment was also significantly low for Decreasing Disruptive Behavior (M=62.94) and Classroom Management (M=50.08). Overall, the teachers underestimated the positive effect of Acceleration and Religious Schools, with mean perception alignments of -12.11 and -9.81 respectively. On average, they also inaccurately rated Charter Schools as having a negative effect on student achievement, with mean perception alignments of -22.88. (See Table 13 for Mean of Teachers' Perceptions and Table 14 for Mean of Teacher Perception Alignment).

Table 13: Paired Samples Statistics for Teachers' Perceptions (TP) of the Influence of Each Factor and the Common Language Effect Size (CLE) for Each Factor

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	TP Leadership	46.30	543	52.278	2.243
	CLE Leadership	25.00	543	.000	.000
Pair 2	TP Finances	46.89	501	63.011	2.815
	CLE Finances	16.00	501	.000	.000
Pair 3	TP Desegregation	47.00	502	59.794	2.669
	CLE Desegregation	20.00	502	.000	.000
Pair 4	TP Religious Schools	6.19	504	48.474	2.159
	CLE Religious Schools	16.00	504	.000	.000
Pair 5	TP Summer School	32.78	500	43.370	1.940
	CLE Summer School	16.00	500	.000	.000
Pair 6	TP Charter Schools	-8.88	504	53.672	2.391
	CLE Charter Schools	14.00	504	.000	.000
Pair 7	TP Ability Grouping	36.55	464	56.104	2.605
	CLE Ability Grouping	9.00	464	.000	.000
Pair 8	TP Reducing Class Size	84.59	464	28.955	1.344
	CLE Reducing Class Size	15.00	464	.000	.000
Pair 9	TP Mainstreaming	21.26	467	60.270	2.789
	CLE Mainstreaming	19.00	467	.000	.000

Table 13: Paired Samples Statistics for Teachers' Perceptions (TP) of the Influence of Each Factor and the Common Language Effect Size (CLE) for Each Factor

		Mean	N	Std. Deviation	Std. Error Mean
Pair 10	TP Multi-Age/Multi-Grade Classes	6.79	469	57.461	2.653
	CLE Multi-Age/Multi-Grade Classes	3.00	469	.000	.000
Pair 11	TP Open vs. Traditional Classes	36.02	467	52.600	2.434
	CLE Open vs. Traditional Classes	.00	467	.000	.000
Pair 12	TP Retention	6.13	466	58.383	2.705
	CLE Retention	-11.00	466	.000	.000
Pair 13	TP Small Group Learning	70.67	464	34.469	1.600
	CLE Small Group Learning	34.00	464	.000	.000
Pair 14	TP Within Class Grouping	42.28	466	55.416	2.567
	CLE Within Class Grouping	11.00	466	.000	.000
Pair 15	TP Classroom Management	87.08	447	22.195	1.050
	CLE Classroom Management	37.00	447	.000	.000
Pair 16	TP Decreasing Disruptive Behavior	86.94	447	26.114	1.235
	CLE Decreasing Disruptive Behavior	24.00	447	.000	.000
Pair 17	TP Group Cohesion	81.23	447	28.402	1.343
	CLE Group Cohesion	38.00	447	.000	.000
Pair 18	TP Peer Influences	47.67	447	55.609	2.630
	CLE Peer Influences	37.00	447	.000	.000
Pair 19	TP Ability Grouping for Gifted Students	45.87	437	48.587	2.324
	CLE Ability Grouping for Gifted Students	21.00	437	.000	.000
Pair 20	TP Acceleration	49.89	437	46.075	2.204
	CLE Acceleration	62.00	437	.000	.000
Pair 21	TP Enrichment	67.18	437	36.309	1.737
	CLE Enrichment	28.00	437	.000	.000

Table 14: Paired-Samples T-Test for Teachers' Perceptions (TP) of the Influence of Each Factor and the Common Language Effect Size (CLE) for Each Factor

	N	Mean	Standard Deviation	t	df	Sig. (2-tailed)	Eta Squared
Leadership (TP-CLE)	543	21.304	52.278	9.496	542	.000	0.14
Finances (TP-CLE)	501	30.0894	63.011	10.974	500	.000	0.19
Desegregation (TP-CLE)	502	26.996	59.794	10.116	501	.000	0.17

Table 14: Paired-Samples T-Test for Teachers' Perceptions (TP) of the Influence of Each Factor and the Common Language Effect Size (CLE) for Each Factor

	N	Mean	Standard Deviation	t	df	Sig. (2-tailed)	Eta Squared
Religious Schools (TP-CLE)	504	-9.806	48.474	-4.541	503	.000	0.039
Summer Schools (TP-CLE)	500	16.778	43.370	8.650	499	.000	0.13
Charter Schools (TP-CLE)	504	-22.881	53.672	-9.571	503	.000	0.15
Ability Grouping (TP-CLE)	464	27.550	56.104	10.577	463	.000	0.20
Reducing Class Size (TP-CLE)	464	69.595	28.955	51.775	463	.000	0.85
Mainstreaming (TP-CLE)	467	2.257	60.270	.809	466	.419	0.00
Multi-Age/Multi-Grade Classes (TP-CLE)	469	3.791	57.461	1.429	468	.154	0.00
Open Classes (TP-CLE)	467	36.024	52.600	14.800	466	.000	0.32
Retention (TP-CLE)	466	17.127	58.383	6.332	465	.000	0.08
Small-Group Learning (TP-CLE)	464	36.675	34.469	22.919	463	.000	0.53
Within-Class Grouping (TP-CLE)	466	31.277	55.416	12.184	465	.000	0.24
Classroom Management (TP-CLE)	447	50.078	22.195	47.703	446	.000	0.83
Decreasing Disruptive Behavior (TP-CLE)	447	62.935	26.114	50.954	446	.000	0.85
Group Cohesion (TP-CLE)	447	43.230	28.402	32.181	446	.000	0.70
Peer Influences (TP-CLE)	447	10.669	55.609	4.056	446	.000	0.04
Ability Grouping for Gifted Students (TP-CLE)	437	24.867	48.587	10.699	436	.000	0.20
Acceleration (TP-CLE)	437	-12.110	46.075	-5.494	436	.000	0.07
Enrichment (TP-CLE)	437	39.183	36.309	22.559	436	.000	0.53

To examine possible unconscious bias in relation to the perceived effect of the factors of Religious Schools and Charter Schools on student achievement, sub-analyses utilizing hierarchical multiple regression were completed. The hierarchical multiple regression equation, model, and block order are the same as those presented in the Data Analysis Section for research questions 2 and 3 (See Table 2 and Figure 3). The independent variables are teacher perception alignment for the effect of Religious Schools on student achievement and teacher perception alignment for the effect of Charter Schools on student achievement respectively.

The following demographic variables were excluded by SPSS Version 25 for both hierarchical multiple regressions: White, Bachelor's Degree, Earning Highest Degree in the South, Regular Education, Traditional Public School, Rural, and Teaching in the South as their data can be extrapolated from the data associated with their correlated variables. These variables act as reference categories for the categorical variables.

Preliminary analyses revealed large correlations between White and each of the other race/ethnicity groups: Black/African American (r= -0.54), Asian (r= -0.53), and Other (r= -0.58). Large correlations were also discovered for the highest degree earned groups of Bachelor's Degree and Master's Degree (r= -0.67), the educational services provided groups of Regular Education and Special Education (r= -0.59) and Regular Education and Specialized Instruction (r= -0.77), the community types of Urban and Suburban (r= -0.53) and Suburban and Rural (r= -0.56), the school types of Traditional Public and Non-religious Private (r= -0.53) and Traditional Public and Religious Private (r= -0.51). Large correlations were also found for currently teaching pre-kindergarten and previously teaching pre-kindergarten (r=0.50), currently teaching elementary school grade(s) and previously teaching elementary school grade(s) (r=0.50), currently teaching middle school grade(s) and currently teaching high school grade(s) (r= -0.61),

currently teaching high school grade(s) and previously teaching high school grade(s) (r=0.67), teaching in the Northeast and earning highest degree in the Northeast (r=0.84), teaching in the South and earning highest degree in the South (r=0.83), teaching in the Midwest and earning highest degree in the Midwest (r=0.81), teaching in the West and earning highest degree in the West (r=0.77).

Results of the hierarchical multiple regression for the Religious Schools factor demonstrated a statistically significant difference in teachers' perceptions based on demographic characteristics (F (32, 423) = 2.81, $p < 0.001$). Teacher characteristics explained 1.3% of the variance in teacher perception alignment with current research. The total variance explained by the demographic variables was 11.3%, F (32, 423) = 2.81, $p < 0.001$. School characteristics explained 10.0% of the variance, after controlling for teacher characteristics, adjusted R squared change = 0.10, F change (10, 423) = 5.87, $p < 0.001$. Overall, demographic characteristics had a statistically significant impact on teacher alignment for the Religious Schools factor. When separated into groups, school characteristics continued to have a significant impact on teacher alignment (F change (10, 423) = 5.87, $p < 0.001$) while teacher characteristics did not (F change (22, 433) = 1.268, $p = 0.188$) (See Tables 16 and 17).

Results of the regression indicated only two individual characteristics were statistically significant predictors of teacher perception alignment with current research: teaching at a Religious Private School (β=0.334, $p< 0.001$) and Teaching in the Midwest (β= -0.175, p=0.049) (See Table 18). Furthermore, teachers of religious schools on average rated the effects of religious schools as positively impacting 60.84% of students. On average, teachers of other types of schools rated the effects of religious schools as positively impacting only 2.51% of students.

Table 15: Descriptive Statistics for Regression Variables for the Religious Schools Factor			
	Mean	Std. Deviation	N
Avg. TP Alignment for Religious Schools	-10.54	48.078	456
Sex	1.78	.413	456
White	.86	.350	456
Black	.05	.210	456
Asian	.04	.205	456
Other	.05	.224	456
Experience	17.09	10.438	456
Bachelor's Degree	.20	.398	456
Master's Degree	.64	.480	456
Specialist Degree	.08	.270	456
Doctorate Degree	.08	.273	456
Degree Northeast	.22	.417	456
Degree South	.35	.478	456
Degree Midwest	.30	.457	456
Degree West	.13	.336	456
Regular Education	.88	.329	456
Special Education	.05	.210	456
Specialized Instruction	.08	.266	456
Nationally Certified	.12	.329	456
Teach PreK	.04	.190	456
Teach Elementary	.16	.369	456
Teach Middle	.40	.490	456
Teach High	.56	.497	456
Taught PreK	.09	.289	456
Taught Elementary	.30	.461	456
Taught Middle	.64	.480	456
Taught High	.62	.486	456
Traditional Public	.80	.400	456
Charter	.05	.224	456
Magnet	.02	.139	456
Non-Religious Private	.07	.248	456
Religious Private	.06	.240	456
Urban	.28	.449	456
Suburban	.42	.494	456
Rural	.30	.459	456

Table 15: Descriptive Statistics for Regression Variables for the Religious Schools Factor

	Mean	Std. Deviation	N
Teach Northeast	.20	.397	456
Teach South	.41	.492	456
Teach Midwest	.26	.440	456
Teach West	.14	.345	456
Title 1 School	.52	.500	456

Table 16: Model Summary for Prediction of Teacher Perception Alignment for the Religious Schools Factor

						Change Statistics			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.246[a]	.061	.013	47.769	.061	1.268	22	433	.188
2	.418[b]	.175	.113	45.290	.115	5.871	10	423	.000

Dependent Variable: Teacher Perception Alignment Mean for the Religious Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 17: ANOVA Model for Prediction of Teacher Perception Alignment for the Religious Schools Factor

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63652.058	22	2893.275	1.268	.188[a]
	Residual	988073.065	433	2281.924		
	Total	1051725.123	455			
2	Regression	184082.022	32	5752.563	2.805	.000[b]
	Residual	867643.101	423	2051.166		
	Total	1051725.123	455			

Table 17: ANOVA Model for Prediction of Teacher Perception Alignment for the Religious Schools Factor

Dependent Variable: Teacher Perception Alignment Mean for the Religious Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 18: Regression Coefficients for Teacher Perception Alignment for the Religious Schools Factor

	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Sex	11.807	5.812	.101*	8.845	5.581	.076
Black	5.992	10.983	.026	11.594	10.818	.051
Asian	10.975	11.507	.047	16.962	11.365	.072
Other	11.415	10.409	.053	9.863	10.019	.046
Experience	.250	.231	.054	.267	.222	.058
Master's Degree	-6.640	6.110	-.066	-5.417	5.871	-.054
Specialist Degree	.121	9.949	.001	-1.100	9.494	-.006
Doctorate Degree	8.232	9.885	.047	7.166	9.557	.041
Degree Northeast	-13.619	6.373	-.118*	3.878	11.140	.034
Degree Midwest	-6.240	5.932	-.059	12.432	9.671	.118
Degree West	-4.218	7.748	-.029	12.423	11.868	.087
Special Education	3.466	10.975	.015	3.495	10.524	.015
Specialized Instruction	-11.711	8.904	-.065	-8.083	8.545	-.045
Nationally Certified	-9.708	6.941	-.066	-6.358	6.668	-.043
Teach PreK	9.160	14.204	.036	13.526	13.800	.053
Teach Elementary	3.802	8.575	.029	7.396	8.321	.057
Teach Middle	7.429	7.376	.076	4.647	7.099	.047
Teach High	3.453	8.575	.036	.745	8.236	.008
Taught PreK	-9.184	9.492	-.055	-16.341	9.152	-.098
Taught Elementary	-.549	6.283	-.005	-2.069	6.036	-.020
Taught Middle	6.708	5.574	.067	6.073	5.321	.061
Taught High	-2.837	6.506	-.029	-2.859	6.235	-.029
Charter				3.398	9.985	.016
Magnet				-2.217	16.298	-.006

Table 18: Regression Coefficients for Teacher Perception Alignment for the Religious Schools Factor

	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Non-Religious Private				-6.682	9.780	-.034
Religious Private				66.830	9.728	.334**
Urban				-7.323	6.202	-.068
Suburban				.945	5.664	.010
Teach Northeast				-13.257	11.356	-.109
Teach Midwest				-19.127	9.709	-.175*
Teach West				-16.046	11.229	-.115
Title 1 School				9.835	5.157	.102

*p < 0.05. **p < 0.01

Dependent Variable: Teacher Perception Alignment Mean for the Religious Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)
b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Preliminary analyses revealed large correlations between White and each of the other race/ethnicity groups: Black/African American (r= -0.54), Asian (r= -0.53), and Other (r= -0.57). Large correlations were also discovered for the highest degree earned groups of Bachelor's Degree and Master's Degree (r= -0.66), the educational services provided groups of Regular Education and Special Education (r= -0.59) and Regular Education and Specialized Instruction (r= -0.77), the community types of Urban and Suburban (r= -0.53) and Suburban and Rural (r= -0.56), the school types of Traditional Public and Non-religious Private (r= -0.53) and Traditional Public and Religious Private (r= -0.52). Large correlations were also found for currently teaching pre-kindergarten and previously teaching pre-kindergarten (r=0.50), currently teaching

elementary school grade(s) and previously teaching elementary school grade(s) (r=0.50), currently teaching middle school grade(s) and currently teaching high school grade(s) (r= -0.61), currently teaching high school grade(s) and previously teaching high school grade(s) (r=0.68), teaching in the Northeast and earning highest degree in the Northeast (r=0.84), teaching in the South and earning highest degree in the South (r=0.84), teaching in the Midwest and earning highest degree in the Midwest (r=0.81), teaching in the West and earning highest degree in the West (r=0.77).

Results of the hierarchical multiple regression for the Charter Schools factor demonstrated a statistically significant difference in teachers' perceptions based on demographic characteristics (F (32, 422) = 2.10, p = 0.001). Teacher characteristics explained 2.5% of the variance in teacher perception alignment with current research. The total variance explained by the demographic variables was 7.2%, F (32, 422) = 2.10, p = 0.001. School characteristics explained 4.7% of the variance, after controlling for teacher characteristics, adjusted R squared change = 0.047, F change (10, 422) = 3.16, p < 0.001. Overall, demographic characteristics had a statistically significant impact on teacher alignment. When separated into groups, school characteristics continued to have a significant impact on teacher alignment (F change (10, 422) = 3.16, p < 0.001) while teacher characteristics did not (F change (22, 432) = 1.533, p = 0.059) (See Tables 20 and 21). Results of the regression indicated only two individual characteristics were statistically significant predictors of teacher perception alignment with current research: holding a Master's Degree (β= -0.146, p= 0.015) and teaching at a Charter School (β=0.224, p < 0.001) (See Table 22). Furthermore, teachers of charter schools on average rated the effects of charter schools as positively impacting 47.93% of students. On average, teachers of other types of schools rated the effects of charter schools as negatively impacting 12.30% of students.

Table 19: Descriptive Statistics for Regression Variables for the Charter Schools Factor			
	Mean	Std. Deviation	N
Avg. TP Alignment for Charter Schools	-22.87	54.187	455
Sex	1.78	.412	455
White	.86	.348	455
Black	.05	.210	455
Asian	.04	.205	455
Other	.05	.219	455
Experience	17.13	10.427	455
Bachelor's Degree	.20	.397	455
Master's Degree	.64	.480	455
Specialist Degree	.08	.274	455
Doctorate Degree	.08	.274	455
Degree Northeast	.22	.417	455
Degree South	.35	.479	455
Degree Midwest	.29	.455	455
Degree West	.13	.336	455
Regular Education	.88	.329	455
Special Education	.05	.210	455
Specialized Instruction	.08	.267	455
Nationally Certified	.12	.329	455
Teach PreK	.04	.190	455
Teach Elementary	.16	.371	455
Teach Middle	.39	.489	455
Teach High	.56	.497	455
Taught PreK	.09	.290	455
Taught Elementary	.31	.462	455
Taught Middle	.64	.480	455
Taught High	.62	.487	455
Traditional Public	.80	.400	455
Charter	.05	.219	455
Magnet	.02	.139	455
Non-Religious Private	.07	.248	455
Religious Private	.06	.245	455
Urban	.28	.449	455
Suburban	.42	.494	455
Rural	.30	.459	455

Table 19: Descriptive Statistics for Regression Variables for the Charter Schools Factor

	Mean	Std. Deviation	N
Teach Northeast	.19	.395	455
Teach South	.41	.492	455
Teach Midwest	.26	.440	455
Teach West	.14	.346	455
Title 1 School	.52	.500	455

Table 20: Model Summary for Prediction of Teacher Perception Alignment for the Charter Schools Factor

						Change Statistics			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.269[a]	.072	.025	53.501	.072	1.533	22	432	.059
2	.370[b]	.137	.072	52.210	.065	3.163	10	422	.001

Dependent Variable: Teacher Perception Alignment Mean for the Charter Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 21: ANOVA Model for Prediction of Teacher Perception Alignment for the Charter Schools Factor

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	96527.505	22	4387.614	1.533	.059[a]
	Residual	1236529.317	432	2862.336		
	Total	1333056.822	454			
2	Regression	182753.815	32	5711.057	2.095	.001[b]
	Residual	1150303.007	422	2725.837		
	Total	1333056.822	454			

Table 21: ANOVA Model for Prediction of Teacher Perception Alignment for the Charter Schools Factor

Dependent Variable: Teacher Perception Alignment Mean for the Religious Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 22: Regression Coefficients for Teacher Perception Alignment for the Charter Schools Factor

	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Sex	9.293	6.529	.071	6.960	6.465	.053
Black	-3.524	12.299	-.014	-1.754	12.467	-.007
Asian	24.915	12.887	.094	22.110	13.105	.084
Other	-7.196	11.926	-.029	-6.526	11.793	-.026
Experience	-.161	.259	-.031*	-.028	.256	-.005
Master's Degree	-17.884	6.870	-.158*	-16.532	6.782	-.146*
Specialist Degree	-23.838	11.007	-.120	-20.506	10.809	-.104
Doctorate Degree	-8.682	11.080	-.044	-6.755	11.016	-.034
Degree Northeast	-6.098	7.133	-.047	7.928	13.026	.061
Degree Midwest	-18.288	6.663	-.154*	-14.397	11.260	-.121
Degree West	-3.575	8.672	-.022	-2.537	13.635	-.016
Special Education	.355	12.288	.001	1.913	12.137	.007
Specialized Instruction	-2.425	9.963	-.012	-3.504	9.847	-.017
Nationally Certified	3.346	7.774	.020	2.587	7.686	.016
Teach PreK	4.180	15.896	.015	-2.580	15.896	-.009
Teach Elementary	-.581	9.603	-.004	-4.161	9.596	-.029
Teach Middle	6.297	8.247	.057	-.791	8.165	-.007
Teach High	11.807	9.638	.108	6.811	9.535	.062
Taught PreK	8.361	10.623	.045	4.597	10.548	.025
Taught Elementary	8.849	7.046	.075	7.492	6.966	.064
Taught Middle	-3.056	6.228	-.027	-1.606	6.119	-.014
Taught High	-6.229	7.327	-.056	-10.145	7.249	-.091
Charter				55.381	11.740	.224**
Magnet				-11.264	18.801	-.029

Table 22: Regression Coefficients for Teacher Perception Alignment for the Charter Schools Factor						
	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Non-Religious Private				21.357	11.298	.098
Religious Private				20.902	11.028	.094
Urban				-8.072	7.143	-.067
Suburban				.472	6.553	.004
Teach Northeast				-17.397	13.373	-.127
Teach Midwest				-2.145	11.260	-.017
Teach West				.041	12.949	.000
Title 1 School				4.001	5.975	.037

*p < 0.05. **p < 0.01

Dependent Variable: Teacher Perception Alignment Mean for the Charter Schools Factor

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Master's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)
b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Research Question 2

Do differences exist among teachers' perceptions based on the demographic characteristics of the teachers or the schools they teach in?

A hierarchical multiple regression was used to determine whether differences in perception exists between groups based on demographic characteristics of teachers and the schools they teach in. This hierarchical multiple regression was also used to answer the subsequent research question in the section below. The number of cases used in the regression was determined on a listwise basis. Due to the number of variables and the tendency for different

school characteristics to attract teachers with specific demographic characteristics, the hierarchical multiple regression was conducted by using the predictor variables in the following block order: Block 1 included all teacher demographic characteristics and Block 2 included all school demographic characteristics. (See Table 2).

Table 23: Descriptive Statistics for Regression Variables for Average Overall Teacher Perception Alignment

	Mean	Std. Deviation	N
Avg. Overall TP Alignment	24.1557	18.28368	398
Sex	1.78	.417	398
White	.86	.348	398
Black	.05	.213	398
Asian	.04	.191	398
Other	.06	.229	398
Experience	17.37	10.413	398
Bachelor's Degree	.19	.394	398
Master's Degree	.64	.481	398
Specialist Degree	.08	.272	398
Doctorate Degree	.09	.287	398
Degree Northeast	.23	.419	398
Degree South	.35	.478	398
Degree Midwest	.29	.456	398
Degree West	.13	.335	398
Regular Education	.87	.332	398
Special Education	.05	.224	398
Specialized Instruction	.07	.260	398
Nationally Certified	.13	.335	398
Teach PreK	.04	.191	398
Teach Elementary	.16	.368	398
Teach Middle	.39	.489	398
Teach High	.56	.497	398
Taught PreK	.09	.280	398
Taught Elementary	.30	.457	398
Taught Middle	.64	.480	398
Taught High	.62	.485	398

Table 23: Descriptive Statistics for Regression Variables for Average Overall Teacher Perception Alignment			
	Mean	Std. Deviation	N
Traditional Public	.81	.394	398
Charter	.05	.213	398
Magnet	.02	.141	398
Non-Religious Private	.07	.247	398
Religious Private	.06	.234	398
Urban	.28	.449	398
Suburban	.41	.492	398
Rural	.31	.464	398
Teach Northeast	.19	.396	398
Teach South	.40	.490	398
Teach Midwest	.26	.441	398
Teach West	.14	.351	398
Title 1 School	.53	.500	398

Preliminary analyses revealed large correlations between the race/ethnicity groups of White and Other (r= -0.60), the highest degree earned groups of Bachelor's Degree and Master's Degree (r= -0.65), the educational services provided groups of Regular Education and Special Education (r= -0.62), the community types of Urban and Suburban (r= -0.518) and Suburban and Rural (r= - 0.560), the school types of Traditional Public and Non-religious Private (r= -0.54). Large correlations were also found for currently teaching pre-kindergarten and previously teaching pre-kindergarten (r=0.55), currently teaching elementary school grade(s) and previously teaching elementary school grade(s) (r=0.50), currently teaching middle school grade(s) and previously teaching high school grade(s) (r=0.61), currently teaching high school grade(s) and previously teaching high school grade(s) (r=0.67), teaching in the Northeast and earning highest degree in the Northeast (r=0.83), teaching in the South and earning highest degree in the South (r=0.84), teaching in the Midwest and earning highest Degree in the Midwest (r=0.80), teaching in the West and earning highest degree in the West (r=0.79).

The following demographic variables were excluded by SPSS Version 25: White, Master's Degree, Earning Highest Degree in the South, Regular Education, Traditional Public School, Rural, and Teaching in the South as their data can be extrapolated from the data associated with their correlated variables. These variables act as reference categories for the categorical variables. A second hierarchical multiple regression with the opposite corresponding variables excluded was conducted to verify the results. The results were the same as the original regression. For simplification, only the original regression is reported.

Results of the hierarchical multiple regression demonstrated a statistically significant difference in teachers' perceptions based on demographic characteristics (F (32, 365) = 2.26, $p < 0.001$). Teacher characteristics explained 7.3% of the variance in teacher perception alignment with current research. The total variance explained by the demographic variables was 9.2%, F (32, 365) = 2.26, $p < 0.001$. School characteristics explained 1.9% of the variance, after controlling for teacher characteristics, adjusted R squared change = 0.019, F change (10, 365) = 1.796, $p = 0.060$. Overall, demographic characteristics had a statistically significant impact on teacher alignment. When separated into groups, teacher characteristics continued to have a significant impact on teacher alignment (F change (22, 375) = 2.422, $p < 0.001$) while school characteristics did not (F change (10, 365) = 1.796, $p = 0.060$) (See Tables 24 and 25).

Table 24: Model Summary for Prediction of Overall Teacher Perception Alignment

						Change Statistics			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.353[a]	.124	.073	17.60339	.124	2.422	22	375	.000
2	.407[b]	.165	.092	17.41946	.041	1.796	10	365	.060

Table 24: Model Summary for Prediction of Overall Teacher Perception Alignment

Dependent Variable: Overall Teacher Perception Alignment Mean

a. Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Bachelor's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 25: ANOVA Model for Prediction of Overall Teacher Perception Alignment

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16509.537	22	750.433	2.422	.000[a]
	Residual	116204.745	375	309.879		
	Total	132714.282	397			
2	Regression	21959.526	32	686.235	2.262	.000[b]
	Residual	110754.756	365	303.438		
	Total	132714.282	397			

Dependent Variable: Overall Teacher Perception Alignment Mean

a. Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Bachelor's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)

b. Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Table 26: Regression Coefficients for Overall Teacher Perception Alignment

	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Sex	2.547	2.277	.058	2.151	2.291	.049
Black	7.787	4.276	.091	9.834	4.410	.115*
Asian	-5.076	4.906	-.053	-3.689	5.052	-.038
Other	3.974	4.044	.050	4.308	4.073	.054
Experience	-.073	.093	-.041	-.071	.093	-.041
Bachelor's Degree	2.754	2.485	.059	2.824	2.492	.061

Table 26: Regression Coefficients for Overall Teacher Perception Alignment						
	Model 1			Model 2		
	B	Std. Error	β	B	Std. Error	β
Specialist Degree	-3.835	3.465	-.057	-3.662	3.444	-.055
Doctorate Degree	-4.958	3.276	-.078	-5.600	3.331	-.088
Degree Northeast	-1.405	2.516	-.032	2.778	4.537	.064
Degree Midwest	-1.608	2.370	-.040	-1.494	4.038	-.037
Degree West	-3.306	3.115	-.061	-2.189	5.050	-.040
Special Education	1.821	4.076	.022	2.717	4.094	.033
Specialized Instruction	5.194	3.611	.074	5.841	3.635	.083
Nationally Certified	-2.118	2.712	-.039	-1.809	2.720	-.033
Teach PreK	-.257	5.867	-.003	-2.118	6.019	-.022
Teach Elementary	5.643	3.414	.114	4.054	3.471	.082
Teach Middle	-3.314	2.924	-.089	-5.448	2.961	-.146
Teach High	-3.980	3.374	-.108	-5.543	3.397	-.151
Taught PreK	-.803	4.010	-.012	-2.925	4.040	-.045
Taught Elementary	-.469	2.490	-.012	-.473	2.501	-.012
Taught Middle	-1.631	2.187	-.043	-1.203	2.179	-.032
Taught High	-2.851	2.588	-.076	-3.809	2.604	-.101
Charter				7.941	4.347	.093
Magnet				3.948	6.645	.030
Non-Religious Private				6.586	4.142	.089
Religious Private				12.750	4.142	.163**
Urban				-2.439	2.557	-.060
Suburban				-1.776	2.354	-.048
Teach Northeast				-4.548	4.717	-.098
Teach Midwest				.335	4.035	.008
Teach West				-1.190	4.738	-.023
Title 1 School				-1.311	2.127	-.036

*p < 0.05. **p < 0.01

Dependent Variable: Overall Teacher Perception Alignment Mean

a. Model 1 Predictors: (Constant), Teacher Characteristics (Sex, Black, Asian, Other, Experience, Bachelor's Degree, Specialist Degree, Doctorate Degree, Degree Northeast, Degree Midwest, Degree West, Special Education, Specialized Instruction, Nationally Certified, Teach PreK, Teach Elementary, Teach Middle, Teach High, Taught PreK, Taught Elementary, Taught Middle, Taught High)
b. Model 2 Predictors: (Constant), Predictors in Model 1 + School Characteristics (Charter, Magnet, Non-Religious Private, Religious Private, Urban, Suburban, Teach Northeast, Teach Midwest, Teach West, Title 1 School)

Research Question 3

What demographic characteristics predict teacher perception alignment with current research regarding the effect factors contributed by the school have on student achievement?

The previously conducted hierarchical multiple regression was used to determine which demographic characteristics predict teacher perception alignment with current research. Results of the regression indicated only two individual characteristics were statistically significant predictors of teacher perception alignment with current research: being a Black or African American teacher (β=0.12, p=0.03) and teaching at a Religious Private School (β= 0.16, p=0.002) (See Table 26).

When compared to teachers of other races/ethnicities, Black or African American teachers' average perception alignment was 9.89 points lower, perceiving on average 9.89% greater influence of school factors on student achievement than their peers. When compared to teachers of other types of schools, teachers of religious private schools' average perception alignment was 8.04 points lower, perceiving on average 8.04% greater influence of school factors on student achievement than their peers.

CHAPTER 7: DISCUSSION

A substantial body of research has examined student achievement over the years. Though this research is vast, there is no indication that the findings are being used in schools and classrooms. Due to the unique opportunity teachers have to impact student achievement, their knowledge of and perceptions related to the factors that influence student achievement are important. When teachers' perceptions align with the research findings, students may be educated in the most effective manner possible. Therefore, the primary purpose of conducting this research was to gather information regarding whether teachers' perceptions, of the effect of each factor on student achievement, are significantly discrepant from the research, differ as a function of demographic characteristics, and which demographic characteristics predict perception alignment with research findings. Understanding differences in teachers' perceptions is crucial to designing and implementing evidence-based interventions, acquiring teacher support and faith in interventions, and addressing their concerns as key stakeholders.

Participants in this study include teachers working with pre-kindergarten through high school students in the United States. Participant demographics were relatively commensurate with data from the National Center for Educational Statistics for the 2015-2016 year. The majority of the participants were Caucasian females with more than 5 years of teaching experience and holding an advanced degree. Most participants teach in traditional public schools and were not nationally certified teachers. Representation was relatively evenly distributed across all regions of the United States as well as types of communities. There was also an even

representation of Title 1 Schools and Non-Title 1 Schools. The majority of participants currently teach and have previous experience teaching middle school and high school grades.

Research Question 1

Do teachers' perceptions align with current research regarding the effect factors contributed by the school have on student achievement?

The study results were consistent with the hypothesis of a statistically significant difference between teachers' perceptions and the current research findings summarized by Hattie (2009). Of the factors analyzed, teachers' perceptions were significantly different from current research for 19 of 21 factors. There were no significant differences between teachers' perceptions and current research related to mainstreaming ($p=0.42$) and multi-age/multi-grade classes ($p=0.15$). Mean alignment for most factors indicates an inflation of the effect each factor has on student achievement. This may be due to a reliance on anecdotal information to form perceptions or views. Personal experiences or anecdotal information tend to be more salient and therefore more memorable than research articles or other data-driven information.

This possible reliance on anecdotal information may explain why teachers' perceptions were least aligned with current research in regard to the effect of reducing class size when compared to other factors. Reducing class size is typically more easily noticeable and palpable for teachers in the classroom than other factors. By reducing class size and subsequently decreasing teacher workload, teachers may experience a feeling of increased self-efficacy. These increased feelings of self-efficacy may alter teachers' perceptions of the degree of impact reducing class size has on the achievement of their students.

Similar reasons may also explain the significantly low teacher perception alignment for the factors of decreasing disruptive behavior and classroom management. Disruptive behavior

draws a great deal of attention from both teachers and students. Therefore, the decrease of this unwanted behavior is quite noticeable for teachers and may contribute to the inflation of the perceived positive effect. Classroom management increases teachers feelings of self-efficacy and promotes smoother transitions between tasks. This may also alter teachers' perceptions of the level of the positive effect of classroom management.

Teachers' perceptions were most aligned with current research in relation to the factor of mainstreaming. On average, teachers' perceptions were only 2.5 percentile points away from the actual common language effect size for mainstreaming. This may be due to relatively more exposure to mainstreaming than other factors. Since the majority of students with individualized education plans participate in mainstreaming, most teachers have had a student with a learning disability in their regular education classroom (National Center for Educational Statistics, 2018). Additionally, individualized education plans require progress monitoring data. Therefore, teachers also have more opportunities to see progress data first-hand.

Likewise, lack of exposure to and experience with acceleration programs may explain teachers' underestimation of the positive effects of acceleration. Opportunities for acceleration within most schools are scarce, especially at the elementary school level. This lack of interaction with acceleration opportunities may have impacted teachers' perceptions.

Additionally, teachers' underestimation of the positive impact of religious schools and their inaccurately negative ratings of the impact of charter schools may be due to unconscious bias, as the majority of the participants teach in traditional public schools. Results of sub-analyses support the hypothesis of unconscious bias as teaching in a religious private school was the greatest individual predictor for teacher alignment of the effect of religious schools on student achievement ($\beta=0.334$, $p< 0.001$). Similarly, teaching in a charter school was the greatest

individual predictor for teacher alignment of the effect of charter schools on student achievement (β=0.224, $p < 0.001$). Of note, charter schools have also recently received substantial negative representation in the media throughout the past 2 years. This may have contributed to the teachers' negative perceptions of charter schools as well.

Research Question 2

Do differences exist among teachers' perceptions based on the demographic characteristics of the teachers or the schools they teach in?

As hypothesized, teacher perceptions differed based on demographic characteristics overall and accounts for 9.2% of the variance in perceptions. Teacher characteristics accounted for 7.3% of the variance. Disproving the hypothesis that both teacher characteristics and school characteristics would significantly predict perceptions, school characteristics did not significantly predict teachers perceptions and accounted for only 1.9% of the variance. This indicates that teacher characteristics may provide greater insight into developing better perception alignment with current research.

Research Question 3

What demographic characteristics predict teacher perception alignment with current research regarding the effect factors contributed by the school have on student achievement?

Only two characteristics were statistically significant predictors of teacher perception alignment with current research: the race/ethnicity group of Black or African American (β=0.12, p=0.26) and the school type of Religious Private School (β=0.16, p=0.002). Black or African American teachers' perception alignment with current research may be influenced by the higher degree of scrutiny they report experiencing compared to their White or Caucasian counterparts

(Kumar and Alvarado, 2013). In regard to teachers of religious private schools, teacher perception alignment may be influenced by the increased orientation toward academic success found in religious private schools. Teachers in religious private schools were also reported by students to be supportive and task-oriented (Fenzel, 2013). These elements may contribute to the inflation of the effect of school factors on student achievement perceived by Black or African American teachers and teachers of religious private schools.

Contrary to the hypothesis, holding an advanced degree was not a significant predictor. This calls into question how to best provide teachers with the skills necessary to accurately evaluate the effectiveness of factors influencing student achievement. Theoretically, the completion of additional statistics courses and an emphasis on research practices throughout the required coursework for advanced degrees should lay the foundation for these skills.

Practical Implications

The findings of this study demonstrate a significant gap between teachers' perceptions of the extent to which factors contributed by the school impact student achievement and the current research related to the effectiveness of these factors. Results showed a tendency for teachers to perceive factors as having a much larger impact on student achievement than the factors actually do. These findings indicate that teachers have difficulty accurately determining the effectiveness of factors related to student achievement or are limited in their knowledge of the current research.

This difficulty to determine effectiveness or limited knowledge of current research impacts teachers in the classroom and those in administrative roles in their ability to select the most effective interventions, curriculum, and teaching strategies. Additionally, their ability to effectively implement these interventions, curriculum, and teaching strategies is affected.

It is important to note that teachers are dedicated and talented professionals. Therefore, it is important that teacher training programs, teacher professional development organizations, and school systems ensure that teachers are provided the resources and skills to easily acquire new research data and articles, as well as skills needed to accurately evaluate effectiveness of factors influencing student achievement. Having access to current research findings and developing effectiveness evaluation skills are essential to allowing teachers to provide students with the most effective learning environments possible.

CHAPTER 8: LIMITATIONS

Though the participant demographic characteristics were relatively commensurate with National Center for Educational Statistics records for the 2015-2016 year, a larger sample could potentially increase the generalizability of findings regarding the impact demographic variables on teachers' perception alignment for demographic characteristics represented by the minority of the participants. Of note, several teachers strikes took place throughout the country during the data collection period. This may have contributed to the difficulty of obtaining assistance from teacher organizations to distribute the survey to teachers.

Feedback from a few participants indicated concern related to question ambiguity. While this is a caveat of ensuring non-leading questions and these participants correctly inferred the intended meaning of the questions, it would perhaps be beneficial to add language such as "when properly implemented" or "overall" to the questions. These adjustment may increase Cronbach's alpha for the reliability of the scale and improve the attrition rate.

Unfortunately, a survey flow coding error limited the level of analyses related to factors of school compositional effects. Inclusion of data related to these factors could contribute to a better understanding of teachers' perceptions and increase generalizability of the findings.

This particular study only examined teachers' perceptions of factors related to student achievement contributed by the school. Examination of teachers' perceptions regarding the effect of teaching approaches may be particularly illuminating when studying teachers' perception alignment as these are the factors teachers have the most control over.

CHAPTER 9: DIRECTIONS FOR FUTURE RESEARCH

Future research should focus on examining how to help teachers gain knowledge about efficacy research and the skills to evaluate the efficacy of factors which may contribute to student achievement. This should include examination of the curriculum of teacher training programs to ensure that teachers are provided these essential skills prior to beginning their careers. Teacher access to current research products should also be examined. Teachers cannot be expected to be knowledgeable about current research without having proper, unhindered access to this information. Professional development opportunities and feasibility of participation in professional development opportunities for teachers should be researched as well. Research in these areas could potential provide evidence necessary to implement policy changes in order to better support teachers, which in turn provides students with more effective learning environments.

Research is also needed to explore what aspects shape teacher perspectives. This information is vital to efforts to ensure teachers' perceptions align with evidence-based research findings. In order to bridge the research to practice gap, teacher perception alignment with research is necessary for teachers to support and have faith in the evidenced-based practices and interventions that are most effective for promoting student achievement.

Additional research is needed to determine what other factors explain the rest of the variance in teacher perceptions. Researchers should explore what aspects of being a Black or African American teacher and teaching at a religious private school decrease perception

alignment with current research. This information can contribute to interventions designed to increase perception alignment with research.

APPENDIX 1: COMMON LANGUAGE EFFECT SIZES

Contributions from the School	Cohen's *d*	*CLE*
	0.23	***16%***
Attributes of the Schools		
Finances	0.23	16%
Types of School		
Desegregation	0.28	20%
Religious Schools	0.23	16%
Summer Schools	0.23	16%
Charter Schools	0.20	14%
School Composition Effects		
School Size	0.43	30%
Principals/School Leaders	0.36	25%
Out of School Experiences	0.09	6%
Summer Vacation	-0.09	-6%
Mobility	-0.34	-24%
Classroom Composition Effects		
Small Group Learning	0.49	34%
Mainstreaming	0.28	19%
Class Size	0.21	15%
Within-class grouping	0.16	11%
Ability Grouping	0.12	9%
Multi-grade/age classes	0.04	3%
Open vs. Traditional	0.01	0%
Retention	-0.16	-11%
School Curriculum Effects		
Acceleration	0.88	62%
Enrichment	0.39	28%
Ability grouping for gifted students	0.30	21%
Classroom Influences		
Classroom Cohesion	0.53	38%
Classroom Management	0.52	37%
Peer Influences	0.53	37%
Decreasing Disruptive Behavior	0.34	24%

APPENDIX 2: LIST OF VARIABLES

Independent Variables	Dependent Variables

Teacher Characteristics:
• Sex
  ○ Male
  ○ Female
• Race or Ethnicity
  ○ White
  ○ Black or African American
  ○ American Indian or Alaska Native
  ○ Asian
  ○ Native Hawaiian or Pacific Islander
  ○ Two or more races
  ○ Other
• Years of teaching experience
• Highest degree earned
  ○ High School Diploma/GED
  ○ Associate's Degree
  ○ Bachelor's Degree
  ○ Master's Degree
  ○ Specialist Degree
  ○ Doctorate Degree
• State where highest degree was earned
• Region where highest degree was earned
  ○ Northeast
  ○ South
  ○ Midwest
  ○ West
• Grade(s) taught
• Grade(s) currently teach
• Educational services provided
  ○ Regular Education
  ○ Special Education
  ○ Specialized Instruction
• National certification status
	Teacher Perception of the Type of Effect of:
	• Finances
	• Desegregation
	• Religious Schools
	• Summer Schools
	• Charter Schools
	• School Size
	• School Leadership
	• Out-of-School Experiences
	• Summer Vacation
	• Mobility
	• Small Group Learning
	• Mainstreaming
	• Class Size
	• Within-class Grouping
	• Ability Grouping
	• Multi-grade/Multi-age Classes
	• Open vs. Traditional Classes
	• Retention
	• Acceleration
	• Enrichment
	• Ability Grouping for Gifted Students
	• Classroom Cohesion
	• Classroom Management
	• Peer Influences
	• Decreasing Disruptive Behavior

School Characteristics: • School type	Teacher Perception of Percent of Students Affected by: • Finances • Desegregation • Religious Schools • Summer Schools

Independent Variables	Dependent Variables
○ Traditional Public ○ Charter ○ Magnet ○ Non-Religious Private ○ Religious Private • Community type ○ Urban ○ Suburban ○ Rural • State currently teach in • Region currently teach in ○ Northeast ○ South ○ Midwest ○ West • Title 1 status	• Charter Schools • School Size • School Leadership • Out-of-School Experiences • Summer Vacation • Mobility • Small Group Learning • Mainstreaming • Class Size • Within-class Grouping • Ability Grouping • Multi-grade/Multi-age Classes • Open vs. Traditional Classes • Retention • Acceleration • Enrichment • Ability Grouping for Gifted Students • Classroom Cohesion • Classroom Management • Peer Influences • Decreasing Disruptive Behavior
Common Language Effect (CLE) of: • Finances • Desegregation • Religious Schools • Summer Schools • Charter Schools • School Size • School Leadership • Out-of-School Experiences • Summer Vacation • Mobility • Small Group Learning • Mainstreaming • Class Size • Within-class Grouping • Ability Grouping • Multi-grade/Multi-age Classes • Open vs. Traditional Classes • Retention • Acceleration • Enrichment • Ability Grouping for Gifted Students	Teacher Perception Alignment for: • Finances • Desegregation • Religious Schools • Summer Schools • Charter Schools • School Size • School Leadership • Out-of-School Experiences • Summer Vacation • Mobility • Small Group Learning • Mainstreaming • Class Size • Within-class Grouping • Ability Grouping • Multi-grade/Multi-age Classes • Open vs. Traditional Classes • Retention • Acceleration • Enrichment • Ability Grouping for Gifted Students

Independent Variables	Dependent Variables
• Classroom Cohesion • Classroom Management • Peer Influences • Decreasing Disruptive Behavior	• Classroom Cohesion • Classroom Management • Peer Influences • Decreasing Disruptive Behavior
	Average Teacher Perception Alignment for: • Finances • Desegregation • Religious Schools • Summer Schools • Charter Schools • School Size • School Leadership • Out-of-School Experiences • Summer Vacation • Mobility • Small Group Learning • Mainstreaming • Class Size • Within-class Grouping • Ability Grouping • Multi-grade/Multi-age Classes • Open vs. Traditional Classes • Retention • Acceleration • Enrichment • Ability Grouping for Gifted Students • Classroom Cohesion • Classroom Management • Peer Influences • Decreasing Disruptive Behavior
	Average Overall Teacher Perception Alignment

APPENDIX 3: SURVEY

The following survey will ask you various questions about your current school environment and your views regarding the factors that may influence student academic achievement. Your participation is strictly voluntary and you may stop at any time. Your responses are anonymous and will be used to gain a better understanding of the perceptions of teachers regarding the factors that may influence student academic achievement. If you have questions about this survey or the results obtained, please contact school psychology graduate student, Erica Pollock (enp@unc.edu) of the University of North Carolina. By clicking continue, you are consenting to participate in this study.

Select your sex:

- ❍ Male
- ❍ Female
- ❍ Prefer not to answer

Select your race/ethnicity:

(Categories based on the U.S. Census Bureau)

- ❍ White
- ❍ Black or African American
- ❍ American Indian or Alaska Native
- ❍ Asian
- ❍ Native Hawaiian or Pacific Islander
- ❍ Two or more races
- ❍ Other
- ❍ Prefer not to answer

How many years of experience in teaching do you have?

_____

What grades do you currently teach? (Select all that apply)

- ❑ Pre-K
- ❑ Kindergarten
- ❑ 1
- ❑ 2
- ❑ 3
- ❑ 4
- ❑ 5
- ❑ 6
- ❑ 7
- ❑ 8
- ❑ 9
- ❑ 10
- ❑ 11
- ❑ 12
- ❑ 12 for special education students (up to age 21)

What grades have you previously taught? (Select all that apply)

- ❑ Pre-K
- ❑ Kindergarten
- ❑ 1
- ❑ 2
- ❑ 3
- ❑ 4
- ❑ 5
- ❑ 6
- ❑ 7
- ❑ 8
- ❑ 9
- ❑ 10
- ❑ 11
- ❑ 12
- ❑ 12 for special education students (up to age 21)

What type of educational services do you provide?

- ❍ Regular Education
- ❍ Special Education
- ❍ Specialized Instruction {e.g. Gifted Education, Response To Intervention (RTI) / Multi-Tiered System of Support (MTSS) Tier 3 Academic Intervention Implementation, etc...}

What type of school do you teach in?

- ❍ Traditional Public
- ❍ Charter
- ❍ Magnet
- ❍ Non-Religious Private
- ❍ Religious Private

Is your school a Title I school?

(Schools with high percentages of low-income students who receive additional funding through Title 1 of the Elementary and Secondary Education Act)

- ❍ Yes
- ❍ No
- ❍ Do Not Know

What type of community is your school located in?

- ❍ Urban (Metropolitan or city area)
- ❍ Suburban (Area immediately outside of a city or town)
- ❍ Rural (Countryside)
- ❍ Do Not Know

What state do you teach in?

▼ Alabama ... Wyoming

What is the highest degree you have completed?

- ❍ High School Diploma/GED
- ❍ Associate's Degree
- ❍ Bachelor's Degree
- ❍ Master's Degree
- ❍ Specialist Degree
- ❍ Doctorate Degree

In what state did you earn your highest degree?

▼ Alabama ... Wyoming

Are you a Nationally Certified Teacher?

- ❍ Yes
- ❍ No

The following questions will ask you about your views regarding the factors that may influence student academic achievement.

<u>Contributions from the School</u>: Please rate the effect each contribution from the school has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Attributes of the Schools (including school finances and the type of school)	❍	❍	❍
Classroom Compositional Effects (including small-group learning, mainstreaming, reducing class size, within-class grouping, ability grouping, multi-grade/multi-age classes, open vs. traditional classes, retention, and single-sex classes)	❍	❍	❍
Classroom Influences (includes group cohesion, peer influences, classroom management, and decreasing disruptive behavior)	❍	❍	❍
Leadership (the instructional and transformational leadership of the principals and other leaders of a school)	❍	❍	❍
School Compositional Effects (school size, out-of-school curriculum experiences, summer vacation, and mobility)	❍	❍	❍
School Curriculum Effects (acceleration, enrichment, and ability grouping for gifted students)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Attributes of the Schools (including school finances and the type of school)	
Classroom Compositional Effects (including small-group learning, mainstreaming, reducing class size, within-class grouping, ability grouping, multi-grade/multi-age classes, open vs. traditional classes, retention, and single-sex classes)	
Classroom Influences (includes group cohesion, peer influences, classroom management, and decreasing disruptive behavior)	
Leadership (the instructional and transformational leadership of the principals and other leaders of a school)	
School Compositional Effects (school size, out-of-school curriculum experiences, summer vacation, and mobility)	
School Curriculum Effects (acceleration, enrichment, and ability grouping for gifted students)	

On average, what percent of students are **negatively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Attributes of the Schools (including school finances and the type of school)	
Classroom Compositional Effects (including small-group learning, mainstreaming, reducing class size, within-class grouping, ability grouping, multi-grade/multi-age classes, open vs. traditional classes, retention, and single-sex classes)	
Classroom Influences (includes group cohesion, peer influences, classroom management, and decreasing disruptive behavior)	
Leadership (the instructional and transformational leadership of the principals and other leaders of a school)	
School Compositional Effects (school size, out-of-school curriculum experiences, summer vacation, and mobility)	
School Curriculum Effects (acceleration, enrichment, and ability grouping for gifted students)	

Attributes of the Schools: Please rate the effect each contribution has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Finances (the amount of money spent on education)	❍	❍	❍
Desegregation (schools that are not racially segregated)	❍	❍	❍
Religious Schools (private schools run by a religious body)	❍	❍	❍
Summer Schools (supplementary and remedial educational instruction provided to students during the summer)	❍	❍	❍
Charter Schools (publically funded independent schools established under a charter with a local or national authority)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Finances (the amount of money spent on education)	
Desegregation (schools that are not racially segregated)	
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Summer Schools (supplementary and remedial educational instruction provided to students during the summer)	
Charter Schools (publically funded independent schools established under a charter with a local or national authority)	

Classroom Compositional Effects: Please rate the effect each contribution has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Ability Grouping (the assignment of students to classes based on their abilities)	❍	❍	❍
Reducing Class Size (reducing the number of students in a given class; i.e. reducing class size from 25 students per class to 15 students per class)	❍	❍	❍
Mainstreaming (refers to placing students with disabilities in regular education classrooms to provide the least restrictive environment for the students)	❍	❍	❍
Multi-grade/Multi-age Classes (classes with students of multiple different grades and ages in the same class)	❍	❍	❍
Open vs. Traditional Classes (refers to an individualized and flexible form of instruction using manipulative materials rather than the traditionally structured form of instruction)	❍	❍	❍
Retention (the practice of not promoting students up a grade level in school)	❍	❍	❍
Single-Sex Classes (classes composed of students of a single sex; i.e., classes of only male students, classes of only female students)	❍	❍	❍
Small-Group Learning (where students are assigned to work in a small group to complete a task)	❍	❍	❍
Within-Class Grouping (involves teachers placing students into groups within the class based on their abilities)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Ability Grouping (the assignment of students to classes based on their abilities)	
Reducing Class Size (reducing the number of students in a given class; i.e. reducing class size from 25 students per class to 15 students per class)	
Mainstreaming (refers to placing students with disabilities in regular education classrooms to provide the least restrictive environment for the students)	
Multi-grade/Multi-age Classes (classes with students of multiple different grades and ages in the same class)	
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Small-Group Learning (where students are assigned to work in a small group to complete a task)	
Within-Class Grouping (involves teachers placing students into groups within the class based on their abilities)	

On average, what percent of students are **negatively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Ability Grouping (the assignment of students to classes based on their abilities)	
Reducing Class Size (reducing the number of students in a given class; i.e. reducing class size from 25 students per class to 15 students per class)	
Mainstreaming (refers to placing students with disabilities in regular education classrooms to provide the least restrictive environment for the students)	
Multi-grade/Multi-age Classes (classes with students of multiple different grades and ages in the same class)	
Open vs. Traditional Classes (refers to an individualized and flexible form of instruction using manipulative materials rather than the traditionally structured form of instruction)	
Retention (the practice of not promoting students up a grade level in school)	
Single-Sex Classes (classes composed of students of a single sex; i.e., classes of only male students, classes of only female students)	
Small-Group Learning (where students are assigned to work in a small group to complete a task)	
Within-Class Grouping (involves teachers placing students into groups within the class based on their abilities)	

Classroom Influences: Please rate the effect each contribution has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Classroom Management (the strategies a teacher uses to maintain a classroom environment conducive to learning)	❍	❍	❍
Decreasing Disruptive Behavior (decreasing disruptive student behavior in the classroom)	❍	❍	❍
Group Cohesion (the sense that all (teachers and students) are working towards positive learning gains)	❍	❍	❍
Peer Influences (refer to how a student's peers may influence the students' academic performance)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Classroom Management (the strategies a teacher uses to maintain a classroom environment conducive to learning)	
Decreasing Disruptive Behavior (decreasing disruptive student behavior in the classroom)	
Group Cohesion (the sense that all (teachers and students) are working towards positive learning gains)	
Peer Influences (refer to how a student's peers may influence the students' academic performance)	

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Classroom Management (the strategies a teacher uses to maintain a classroom environment conducive to learning)	
Decreasing Disruptive Behavior (decreasing disruptive student behavior in the classroom)	
Group Cohesion (the sense that all (teachers and students) are working towards positive learning gains)	
Peer Influences (refer to how a student's peers may influence the students' academic performance)	

School Compositional Effects: Please rate the effect each contribution has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Mobility (how frequently students' change schools)	❍	❍	❍
Out-of-School Curriculum Experiences (students' educational experiences outside of school)	❍	❍	❍
School Size (the number of students attending the school)	❍	❍	❍
Summer Vacation (the time in which students do not attend school in the summer months)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Mobility (how frequently students' change schools)	
Out-of-School Curriculum Experiences (students' educational experiences outside of school)	
School Size (the number of students attending the school)	
Summer Vacation (the time in which students do not attend school in the summer months)	

On average, what percent of students are **negatively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Mobility (how frequently students' change schools)	
Out-of-School Curriculum Experiences (students' educational experiences outside of school)	
School Size (the number of students attending the school)	
Summer Vacation (the time in which students do not attend school in the summer months)	

School Curriculum Effects: Please rate the effect each contribution has on student academic achievement.

	Negative Effect	No Effect	Positive Effect
Ability Grouping for Gifted Students (the practice of assigning students to classes based on their giftedness in order to provide them with a more challenging curriculum)	❍	❍	❍
Acceleration (a program designed to allow students to accelerate through the curriculum in order to work on tasks that match their abilities)	❍	❍	❍
Enrichment (activities meant to broaden the educational lives of some group of students)	❍	❍	❍

On average, what percent of students are **positively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Ability Grouping for Gifted Students (the practice of assigning students to classes based on their giftedness in order to provide them with a more challenging curriculum)	
Acceleration (a program designed to allow students to accelerate through the curriculum in order to work on tasks that match their abilities)	
Enrichment (activities meant to broaden the educational lives of some group of students)	

On average, what percent of students are **negatively** affected by each factor?

	0 10 20 30 40 50 60 70 80 90 100
Ability Grouping for Gifted Students (the practice of assigning students to classes based on their giftedness in order to provide them with a more challenging curriculum)	
Acceleration (a program designed to allow students to accelerate through the curriculum in order to work on tasks that match their abilities)	
Enrichment (activities meant to broaden the educational lives of some group of students)	

Thank you for your participation! To enter the gift card drawing, please click on the continue arrow.

(To protect your anonymity, you will be redirected to a separate webpage.)

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